

Enclosure 3



Page 1 of 3  
 Westinghouse Electric Company LLC  
 Nuclear Fuel  
 Columbia Fuel Site  
 5801 Bluff Road  
 Hopkins, South Carolina 29061  
 USA

SC Dept. of Health & Environmental Control  
 Bureau of Water/Water Monitoring, Assessment  
 and Protection Division  
 Groundwater Quality Section  
 2600 Bull Street  
 Columbia, South Carolina 29201

Direct tel: 803-647-3171  
 Direct fax: 803-695-3964  
 e-mail: logsdocj@westinghouse.com  
 Your ref: **Site ID # 00456**  
 Our ref: LTR-RAC-13-47

Subject: NPDES Permit #SC0001848  
 Ground Water Sampling, March and June 2013, Annual Report

Date: September 27, 2013

Dear Sir or Madame:

Enclosed are results from the groundwater sampling survey completed during March and June of 2013, as requested by the Bureau of Water via NPDES permit #SC0001848. As we have been transitioning from the 2004-2009 NPDES permit requirements to the 2013-2018 effective date permit requirements during 2013, you have already received Winter groundwater results from Westinghouse, sampled in December 2012. Westinghouse is not required to sample groundwater quarterly, but we do so in order to have the benefit of more data points. In this report, we are sharing March results as well as the required Summer 2013 results.

NPDES required wells W-26, W-41, W-48, and RW-2 were sampled on March 11, 2013 and on June 12, 2013, for volatile and semi-volatile organic compounds by Shealy Environmental Services, by purging three casing volumes using a Teflon bailer, then taking four readings to ensure parameter stabilization prior to sampling using a Grundfos pump. VOC results with the associated field data sheets are attached. The table below represents the only detected results. No results were detected for W-26.

Well	Tetrachloroethene ug/L		Trichloroethene ug/L		cis-1,2- Dichloroethene ug/L	
	Mar-13	Jun-13	Mar-13	Jun-13	Mar-13	Jun-13
W41	210.0	180.0	41.0	43.0	<5.0	1.2
W48	180.0	140.0	1.3	1.4	3.2	3.5
WRW-2	170.0	130.0	7.7	5.8	1.1	<1.0

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The Westinghouse technician sampled the remaining NDPES required wells, during March and June 2013, by purging three casing volumes using a Teflon bailer, then sampling by also using the dedicated bailer. Analyses for ammonia, fluoride, pH and conductivity are completed by the Westinghouse chemical laboratory, while the Nitrate parameter is analyzed by Shealy Environmental Services. See the tables below for results.

Well	Well water depth in feet	
	Mar-13	Jun-13
W7	16.10	16.90
W10	20.60	20.40
W13R	13.70	12.60
W15	14.00	13.70
W16	10.50	10.90
W18	22.60	22.50
W22	13.10	12.40
W24	12.10	10.60
W26	26.11	25.35
W29	12.50	11.90
W30	13.20	12.50
W32	21.00	20.80
W33	16.70	16.40
W39	17.10	16.30
W41	16.20	15.70
W43	16.90	15.50
W44	20.40	19.80
W47	30.40	29.90
W48	26.84	26.05
WRW-2	18.66	17.91

Well	Conductivity umho/cm	
	Mar-13	Jun-13
W7	1445.0	1604.0
W10	852.0	844.0
W13R	888.0	923.0
W15	410.0	384.0
W16	336.0	286.0
W18	3.9	4180.0
W22	1563.0	417.0
W24	63.4	59.3
W26	192.2	192.0
W29	4.8	4410.0
W30	4.6	2390.0
W32	1582.0	1673.0
W33	152.0	162.8
W39	824.0	515.0
W41	399.0	391.0
W43	131.9	95.8
W44	138.6	126.3
W47	484.0	460.0
W48	120.1	111.2
WRW-2	334.0	312.0

Well	pH	
	Mar-13	Jun-13
W7	7.23	7.03
W10	4.92	5.6
W13R	6.53	6.64
W15	6.40	6.29
W16	6.32	6.15
W18	7.61	7.18
W22	5.21	5.04
W24	5.59	5.58
W26	5.44	5.51
W29	6.78	6.94
W30	5.96	5.76
W32	7.11	6.86
W33	5.74	5.96
W39	5.52	5.49
W41	5.71	5.74
W43	5.42	5.72
W44	5.36	5.42
W47	6.27	5.81
W48	5.61	5.62
WRW-2	4.38	4.38





Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

Well	Ammonia mg/L	
	Mar-13	Jun-13
W7	45.90	51
W10	<1.00	5.42
W13R	41.60	50.2
W15	13.90	15.6
W16	19.80	15.2
W18	78.60	82.3
W22	43.90	7.24
W24	<1.00	<1.00
W26	<1.00	<1.00
W29	25.20	20.7
W30	4.09	2.78
W32	47.10	54.1
W33	<1.00	<1.00
W39	<1.00	<1.00
W41	<1.00	<1.00
W43	<1.00	<1.00
W44	<1.00	<1.00
W47	17.90	13.9
W48	<1.00	<1.00
WRW-2	<1.00	<1.00

Well	Fluoride mg/L	
	Mar-13	Jun-13
W7	8.95	6.75
W10	4.59	2.3
W13R	10.40	10.9
W15	2.37	2.55
W16	11.50	7.9
W18	9.30	7.75
W22	11.40	5.5
W24	<0.500	<0.500
W26	2.57	2.52
W29	4.06	3.89
W30	13.20	12.7
W32	3.79	3.28
W33	<0.500	<0.500
W39	<0.500	<0.500
W41	<0.500	<0.500
W43	<0.500	<0.500
W44	<0.500	<0.500
W47	5.50	5.55
W48	<0.500	<0.500
WRW-2	<0.500	<0.500

Well	Nitrate mg/L	
	Mar-13	Jun-13
W7	120.00	140.00
W10	83.00	76.00
W13R	40.00	39.00
W15	21.00	23.00
W16	2.90	3.40
W18	280.00	490.00
W22	220.00	26.00
W24	0.23	0.30
W26	5.70	6.50
W29	980.00	440.00
W30	660.00	300.00
W32	84.00	170.00
W33	7.90	7.80
W39	87.00	54.00
W41	37.00	40.00
W43	9.40	6.90
W44	8.80	8.20
W47	26.00	27.00
W48	6.40	6.20
WRW-2	28.00	30.00

1. Wells exceeding drinking water standards for fluoride (4 mg/l) or nitrate (10 mg/l) are marked in red.





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Radiological results for Gross Alpha, Gross Beta and Tritium are tabulated below. Gamma results (fission and activation products), for June 2013 only, are attached, as reported by General Engineering Laboratories (GEL).

	<b>Gross Alpha pCi/L</b>	
<b>Well</b>	<b>Mar-13</b>	<b>Jun-13</b>
W7	5.35	2.24
W10	4.04	5.13
W13R	5.78	3.01
W15	3.89	4.08
W16	3.59	3.81
W18	37.20	18.60
W22	4.92	9.88
W24	5.11	0.41
W26	1.49	0.57
W29	12.70	6.42
W30	18.80	13.30
W32	8.43	2.08
W33	1.96	0.83
W39	2.20	1.70
W41	4.51	2.87
W43	4.74	0.66
W44	1.28	1.40
W47	3.97	3.84
W48	0.00	2.30
WRW-2	1.91	0.69

	<b>Gross Beta pCi/L</b>	
<b>Well</b>	<b>Mar-13</b>	<b>Jun-13</b>
W7	135.00	102.00
W10	79.80	53.90
W13R	99.30	130.00
W15	174.00	145.00
W16	25.70	19.20
W18	192.00	184.00
W22	70.90	26.10
W24	5.84	8.05
W26	14.10	9.21
W29	94.40	67.60
W30	102.00	45.70
W32	264.00	213.00
W33	4.28	6.39
W39	23.70	16.00
W41	11.70	10.60
W43	6.44	5.47
W44	8.40	5.35
W47	116.00	96.40
W48	10.10	7.33
WRW-2	7.72	7.81

	<b>Tritium pCi/L</b>
<b>Well</b>	<b>Jun-13</b>
W7	275.0
W10	0.0
W13R	142.0
W15	48.1
W16	142.0
W18	144.0
W22	33.7
W24	16.9
W26	114.0
W29	226.0
W30	143.0
W32	229.0
W33	224.0
W39	256.0
W41	128.0
W43	57.2
W44	271.0
W47	198.0
W48	241.0
WRW-2	81.9

Please contact me at (803) 647-3171 if you have any questions regarding these results.

Sincerely,  
WESTINGHOUSE ELECTRIC COMPANY LLC

Cynthia J. Logsdon  
Principal Environmental Engineer  
Environment, Health & Safety  
Columbia Fuel Fabrication Facility, Westinghouse Electric Company

Enclosures/

- a) Shealy Environmental Services lab report, VOC analytical results
- b) GEL lab report, radiological analytical results





April 27, 2013

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

Re: Environmental - PO 4500430628  
Work Order: 322093

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 19, 2013. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500430628  
Enclosures



# TWO INCH WELL LIQUID SAMPLING & PACKING LIST & CHAIN OF CUSTODY FORM

FORM NO.: ROF-06-007-1  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 02-17-05

VENDOR: General Engineering

Month: March

Year: 2013

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

322093

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	GROSS ALPHA	GROSS BETA	ISOTOPIC URANIUM	TC-99	INITIAL
WELL	3A	3/12/13 10:00	1000	X	X		X	REC
WELL	7	3/15/13 11:57	1000	X	X		X	REC
WELL	10	3/15/13 13:45	1000	X	X		X	REC
WELL	13R	3/14/13 14:03	1000	X	X		X	REC
WELL	14	3/11/13 13:45	1000	X	X		X	REC
WELL	15	3/11/13 11:40	1000	X	X		X	REC
WELL	16	3/11/13 14:00	1000	X	X		X	REC
WELL	18	3/15/13 10:31	1000	X	X		X	REC
WELL	19	3/12/13 12:05	1000	X	X		X	REC
WELL	20	3/11/13 14:20	1000	X	X		X	REC
WELL	22	3/15/13 10:45	1000	X	X		X	REC
WELL	23R	3/11/13 13:20	1000	X	X		X	REC
WELL	24	3/11/13 10:50	1000	X	X		X	REC
WELL	26	3/11/13 10:30	1000	X	X		X	REC
WELL	27	3/11/13 14:40	1000	X	X		X	REC
WELL	28	3/15/13 11:40	1000	X	X		X	REC
WELL	29	3/15/13 11:05	1000	X	X		X	REC
WELL	30	3/15/13 11:20	1000	X	X		X	REC
WELL	32	3/15/13 12:15	1000	X	X		X	REC
WELL	33	3/11/13 11:15	1000	X	X		X	REC
WELL	37	3/15/13 09:00	1000	X	X		X	REC
WELL	38	2/28/13 09:20	1000	X	X		X	REC
WELL	41R	3/11/13 09:45	1000	X	X		X	REC
WELL	48	3/11/13 10:05	1000	X	X		X	REC
WELL	RW-2	3/11/13 09:26	1000	X	X		X	REC

Technician: Randy Crews

Date Shipped: 3/18/13

FORM NO.:	ROF-06-007-1
REVISION:	5
PAGE:	1 OF 1
EFFECTIVE DATE:	02-17-05

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

[illegible]

Technician: Randy Crews *Randy Crews*

Date Shipped: **3/18/13**

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>322093</u>	
Received By: <u>MLC</u>		Date Received: <u>3-19-13</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>Cpmo</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>(None)</u> Other (describe) <u>16°</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>47502132</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected: <u>* see Below</u>
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected: <u>* see Below</u>
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"/>			
14 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other <u>1Z222 210 01 9458 7706 16°</u> <u>9011 3519 16°</u>

Comments (Use Continuation Form if needed):

\* DID NOT receive well #35 - see email/Revised COC  
RA 3/17/13

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 322093 GEL Work Order: 322093

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 3A	Project:	WNUC00122
Sample ID:	322093001	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 10:00		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	0.459	+/-0.966	1.92	5.00	pCi/L		DYT1	04/13/13	1458	1292129	1
Beta		4.85	+/-3.08	4.85	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	26.6	+/-102	177	300	pCi/L		MYM1	04/07/13	2138	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 7	Project:	WNUC00122
Sample ID:	322093002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 11:57		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	23.5	+/-25.1	37.0		pCi/L		MXR1	04/18/13	0746 1295214	1
Americium-241	U	35.2	+/-34.7	38.5		pCi/L					
Antimony-124	U	-1.48	+/-12.7	24.4		pCi/L					
Antimony-125	U	-0.726	+/-10.4	18.9		pCi/L					
Barium-133	U	-3.22	+/-4.97	8.20		pCi/L					
Barium-140	U	10.6	+/-27.3	56.4		pCi/L					
Beryllium-7	U	-17.6	+/-46.3	81.9		pCi/L					
Bismuth-212	U	15.0	+/-53.3	99.4		pCi/L					
Bismuth-214	U	6.17	+/-15.9	14.8		pCi/L					
Cerium-139	U	0.212	+/-4.19	6.61		pCi/L					
Cerium-141	U	-4.77	+/-12.5	20.3		pCi/L					
Cerium-144	U	-22.1	+/-26.8	41.2		pCi/L					
Cesium-134	U	0.0578	+/-3.98	7.55		pCi/L					
Cesium-136	U	-18.1	+/-28.1	48.3		pCi/L					
Cesium-137	U	5.17	+/-4.23	8.04	10.0	pCi/L					
Chromium-51	U	-74.6	+/-77.6	121		pCi/L					
Cobalt-56	U	-6.37	+/-5.37	8.78		pCi/L					
Cobalt-57	U	1.30	+/-3.09	5.70		pCi/L					
Cobalt-58	U	-0.146	+/-4.54	8.58		pCi/L					
Cobalt-60	U	3.10	+/-4.36	8.94		pCi/L					
Europium-152	U	-0.835	+/-13.3	20.1		pCi/L					
Europium-154	U	6.00	+/-10.7	22.1		pCi/L					
Europium-155	U	-15.2	+/-13.7	21.7		pCi/L					
Iridium-192	U	3.98	+/-4.98	9.18		pCi/L					
Iron-59	U	-1.24	+/-12.6	23.2		pCi/L					
Lead-210	U	622	+/-1310	1400		pCi/L					
Lead-212	U	-7.68	+/-10.3	16.2		pCi/L					
Lead-214	U	3.58	+/-10.6	16.5		pCi/L					
Manganese-54	U	1.80	+/-3.96	7.76		pCi/L					
Mercury-203	U	0.318	+/-5.98	10.5		pCi/L					
Neodymium-147	U	-41.4	+/-210	376		pCi/L					
Neptunium-239	U	26.8	+/-31.0	58.5		pCi/L					
Niobium-94	U	2.90	+/-4.40	7.42		pCi/L					
Niobium-95	U	2.48	+/-5.28	9.98		pCi/L					
Potassium-40	U	38.6	+/-59.3	107		pCi/L					
Promethium-144	U	1.86	+/-4.65	7.61		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 7

Sample ID: 322093002

Project: WNUC00122

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.048	+/-4.44	8.17	pCi/L
Radium-228	U	23.5	+/-25.1	37.0	pCi/L
Ruthenium-106	U	-8.62	+/-36.2	64.0	pCi/L
Silver-110m	U	-4.41	+/-4.28	6.91	pCi/L
Sodium-22	U	2.14	+/-3.83	7.87	pCi/L
Thallium-208	U	-0.895	+/-5.77	9.89	pCi/L
Thorium-230	U	-112	+/-1870	2700	pCi/L
Thorium-234	U	279	+/-377	337	pCi/L
Tin-113	U	-1.23	+/-5.34	9.65	pCi/L
Uranium-235	U	-15.4	+/-26.4	42.4	pCi/L
Uranium-238	U	279	+/-377	337	pCi/L
Yttrium-88	U	1.81	+/-5.34	11.0	pCi/L
Zinc-65	U	0.621	+/-9.32	17.5	pCi/L
Zirconium-95	U	-3.28	+/-10.8	16.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.35	+/-4.11	4.73	5.00	pCi/L	DYT1	04/13/13	1458	1292129	2
Beta	135	+/-9.72	3.31	5.00	pCi/L					
Alpha	5.07	+/-4.06	4.71	5.00	pCi/L	DYT1	04/15/13	0826	1292129	3
Beta	122	+/-9.27	3.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	222	+/-114	184	300	pCi/L	MYM1	04/14/13	1944	1293595	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 10	Project:	WNUC00122
Sample ID:	322093003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 13:45		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.72	+/-16.8	27.0		pCi/L		MXR1	04/18/13	0747 1295214	1
Americium-241	U	-5.57	+/-11.1	18.4		pCi/L					
Antimony-124	U	4.96	+/-8.20	17.9		pCi/L					
Antimony-125	U	7.00	+/-8.09	15.1		pCi/L					
Barium-133	U	0.298	+/-4.64	7.08		pCi/L					
Barium-140	U	7.40	+/-22.8	40.5		pCi/L					
Beryllium-7	U	-7.77	+/-36.2	65.3		pCi/L					
Bismuth-212	U	18.5	+/-44.3	83.5		pCi/L					
Bismuth-214	U	2.80	+/-11.7	13.1		pCi/L					
Cerium-139	U	-0.749	+/-3.03	5.29		pCi/L					
Cerium-141	U	-6.5	+/-10.1	15.4		pCi/L					
Cerium-144	U	-2.93	+/-18.9	33.5		pCi/L					
Cesium-134	U	3.41	+/-3.18	6.46		pCi/L					
Cesium-136	U	-1.33	+/-22.6	42.4		pCi/L					
Cesium-137	U	1.05	+/-3.12	5.86	10.0	pCi/L					
Chromium-51	U	-6.95	+/-61.4	92.8		pCi/L					
Cobalt-56	U	-2.3	+/-4.27	7.28		pCi/L					
Cobalt-57	U	0.490	+/-2.69	4.29		pCi/L					
Cobalt-58	U	2.41	+/-4.00	7.72		pCi/L					
Cobalt-60	U	1.63	+/-4.14	7.50		pCi/L					
Europium-152	U	1.71	+/-8.97	15.8		pCi/L					
Europium-154	U	1.01	+/-9.39	18.0		pCi/L					
Europium-155	U	-1.23	+/-8.79	15.7		pCi/L					
Iridium-192	U	2.44	+/-4.09	6.57		pCi/L					
Iron-59	U	-0.0814	+/-10.0	18.8		pCi/L					
Lead-210	U	-18.9	+/-236	361		pCi/L					
Lead-212	U	9.40	+/-11.2	11.1		pCi/L					
Lead-214	U	0.629	+/-9.22	13.6		pCi/L					
Manganese-54	U	-0.893	+/-3.16	5.56		pCi/L					
Mercury-203	U	0.433	+/-4.32	7.63		pCi/L					
Neodymium-147	U	117	+/-151	295		pCi/L					
Neptunium-239	U	2.44	+/-26.5	44.2		pCi/L					
Niobium-94	U	1.25	+/-3.06	5.71		pCi/L					
Niobium-95	U	-0.745	+/-3.98	7.11		pCi/L					
Potassium-40		101	+/-53.0	6.78		pCi/L					
Promethium-144	U	-0.751	+/-3.34	5.91		pCi/L					



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## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 10 Project: WNUC00122  
Sample ID: 322093003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.21	+/-3.90	6.85	pCi/L
Radium-228	U	6.72	+/-16.8	27.0	pCi/L
Ruthenium-106	U	-3.8	+/-31.1	48.6	pCi/L
Silver-110m	U	-0.226	+/-3.03	5.50	pCi/L
Sodium-22	U	0.461	+/-3.29	6.34	pCi/L
Thallium-208	UI	0.00	+/-5.17	5.18	pCi/L
Thorium-230	U	548	+/-724	1340	pCi/L
Thorium-234	U	-15.5	+/-128	186	pCi/L
Tin-113	U	0.976	+/-4.44	7.87	pCi/L
Uranium-235	U	10.9	+/-22.7	34.2	pCi/L
Uranium-238	U	-15.5	+/-128	186	pCi/L
Yttrium-88	U	1.93	+/-4.39	8.91	pCi/L
Zinc-65	U	1.20	+/-6.37	12.4	pCi/L
Zirconium-95	U	-2.07	+/-7.58	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.04	+/-3.39	4.48	5.00	pCi/L	DYT1	04/13/13	1456	1292129	2
Beta		79.8	+/-7.63	4.11	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	116	+/-104	173	300	pCi/L	MYM1	04/07/13	2211	1291981	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 13R  
Sample ID: 322093004  
Matrix: Water  
Collect Date: 14-MAR-13 14:03  
Receive Date: 19-MAR-13  
Collector: Client

Project: WNUC00122  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.56	+/-20.9	24.4		pCi/L		MXR1	04/18/13	0747 1295214	1
Americium-241	U	-5.51	+/-21.3	35.2		pCi/L					
Antimony-124	U	1.82	+/-11.2	22.4		pCi/L					
Antimony-125	U	6.85	+/-7.97	15.7		pCi/L					
Barium-133	U	-1.38	+/-4.42	6.93		pCi/L					
Barium-140	U	34.5	+/-27.2	61.1		pCi/L					
Beryllium-7	U	-7.36	+/-37.5	67.1		pCi/L					
Bismuth-212	U	32.6	+/-53.4	91.0		pCi/L					
Bismuth-214	U	0.423	+/-11.7	11.9		pCi/L					
Cerium-139	U	-2.38	+/-2.94	4.94		pCi/L					
Cerium-141	U	1.38	+/-8.61	15.5		pCi/L					
Cerium-144	U	13.1	+/-18.6	34.6		pCi/L					
Cesium-134	U	3.28	+/-3.25	6.86		pCi/L					
Cesium-136	U	-17.2	+/-24.5	41.5		pCi/L					
Cesium-137	U	0.0818	+/-3.31	5.98	10.0	pCi/L					
Chromium-51	U	-7.23	+/-53.6	98.0		pCi/L					
Cobalt-56	U	0.303	+/-4.04	7.69		pCi/L					
Cobalt-57	U	-1.41	+/-2.54	4.43		pCi/L					
Cobalt-58	U	-1.14	+/-4.42	7.86		pCi/L					
Cobalt-60	U	1.54	+/-3.38	7.00		pCi/L					
Europium-152	U	-0.279	+/-8.95	16.4		pCi/L					
Europium-154	U	7.48	+/-9.66	20.1		pCi/L					
Europium-155	U	-12.2	+/-9.67	16.2		pCi/L					
Iridium-192	U	0.622	+/-3.69	6.90		pCi/L					
Iron-59	U	-3.12	+/-9.75	14.9		pCi/L					
Lead-210	U	597	+/-1010	1150		pCi/L					
Lead-212	U	6.24	+/-7.01	10.2		pCi/L					
Lead-214	U	5.30	+/-11.6	13.8		pCi/L					
Manganese-54	U	-1.21	+/-3.26	5.89		pCi/L					
Mercury-203	U	-1.45	+/-4.90	8.26		pCi/L					
Neodymium-147	U	93.1	+/-206	353		pCi/L					
Neptunium-239	U	-15.7	+/-25.5	44.4		pCi/L					
Niobium-94	U	-1.21	+/-3.21	5.48		pCi/L					
Niobium-95	U	-0.749	+/-5.31	7.96		pCi/L					
Potassium-40	U	23.7	+/-49.5	48.8		pCi/L					
Promethium-144	U	1.10	+/-3.20	5.95		pCi/L					

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 13R  
Sample ID: 322093004

Project: WNUC00122  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.56	+/-3.49	6.85	pCi/L
Radium-228	U	6.56	+/-20.9	24.4	pCi/L
Ruthenium-106	U	5.97	+/-29.8	54.8	pCi/L
Silver-110m	U	-0.82	+/-3.21	5.62	pCi/L
Sodium-22	U	2.49	+/-3.42	7.09	pCi/L
Thallium-208	U	2.74	+/-5.50	5.16	pCi/L
Thorium-230	U	550	+/-1730	2470	pCi/L
Thorium-234	U	-286	+/-235	357	pCi/L
Tin-113	U	-4.72	+/-4.45	7.45	pCi/L
Uranium-235	U	-11.5	+/-22.4	33.4	pCi/L
Uranium-238	U	-286	+/-235	357	pCi/L
Yttrium-88	U	3.49	+/-3.90	8.67	pCi/L
Zinc-65	U	-2.53	+/-7.02	12.5	pCi/L
Zirconium-95	U	2.55	+/-8.14	15.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.78	+/-3.62	3.74	5.00	pCi/L	DYT1	04/13/13	1456	1292129	2
Beta	95.7	+/-8.08	3.66	5.00	pCi/L					
Alpha	4.56	+/-3.34	4.21	5.00	pCi/L	DYT1	04/15/13	0826	1292129	3
Beta	99.3	+/-8.39	4.27	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	136	+/-104	171	300	pCi/L	MYM1	04/07/13	2227	1291981	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 14	Project:	WNUC00122
Sample ID:	322093005	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 13:45		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.32	+/-1.80	3.06	5.00	pCi/L		DYT1	04/13/13	1458	1292129	1
Beta	U	2.82	+/-2.77	4.55	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-79.2	+/-96.6	175	300	pCi/L		MYM1	04/07/13	2243	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 15	Project:	WNUC00122
Sample ID:	322093006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 11:40		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	2.81	+/-16.2	27.6		pCi/L		MXR1	04/18/13	0807	1295214	1
Americium-241	U	-27.6	+/-16.4	26.9		pCi/L						
Antimony-124	U	-0.665	+/-11.0	21.5		pCi/L						
Antimony-125	U	8.41	+/-9.25	17.4		pCi/L						
Barium-133	U	-1.24	+/-4.41	7.80		pCi/L						
Barium-140	U	4.61	+/-27.7	55.8		pCi/L						
Beryllium-7	U	-0.794	+/-43.5	78.2		pCi/L						
Bismuth-212	U	40.0	+/-51.1	97.9		pCi/L						
Bismuth-214	U	-0.0543	+/-10.0	14.8		pCi/L						
Cerium-139	U	-1.62	+/-3.85	6.01		pCi/L						
Cerium-141	U	2.22	+/-16.9	17.2		pCi/L						
Cerium-144	U	28.8	+/-23.3	42.9		pCi/L						
Cesium-134	U	1.14	+/-3.63	7.00		pCi/L						
Cesium-136	U	16.3	+/-30.7	60.9		pCi/L						
Cesium-137	U	2.23	+/-6.91	6.54	10.0	pCi/L						
Chromium-51	U	2.82	+/-69.0	125		pCi/L						
Cobalt-56	U	2.17	+/-8.02	9.02		pCi/L						
Cobalt-57	U	0.0704	+/-2.89	5.06		pCi/L						
Cobalt-58	U	0.981	+/-4.16	8.03		pCi/L						
Cobalt-60	U	3.05	+/-2.64	6.53		pCi/L						
Europium-152	U	-6.28	+/-10.1	17.5		pCi/L						
Europium-154	U	-2.39	+/-9.09	16.5		pCi/L						
Europium-155	U	5.82	+/-11.2	20.2		pCi/L						
Iridium-192	U	1.21	+/-4.70	7.92		pCi/L						
Iron-59	U	-1.6	+/-13.1	20.6		pCi/L						
Lead-210	U	-150	+/-439	720		pCi/L						
Lead-212	U	1.54	+/-10.5	12.8		pCi/L						
Lead-214	U	-4.82	+/-9.66	13.8		pCi/L						
Manganese-54	U	0.986	+/-3.49	6.69		pCi/L						
Mercury-203	U	9.52	+/-7.67	9.88		pCi/L						
Neodymium-147	U	-151	+/-230	391		pCi/L						
Neptunium-239	U	-15.5	+/-29.3	50.0		pCi/L						
Niobium-94	U	1.27	+/-3.55	6.48		pCi/L						
Niobium-95	U	-0.171	+/-4.45	7.97		pCi/L						
Potassium-40	U	-34.1	+/-56.3	85.5		pCi/L						
Promethium-144	U	0.990	+/-3.76	6.83		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 15  
Sample ID: 322093006

Project: WNUC00122  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.374	+/-5.34	7.88	pCi/L
Radium-228	U	2.81	+/-16.2	27.6	pCi/L
Ruthenium-106	U	-16.7	+/-35.5	60.7	pCi/L
Silver-110m	U	1.65	+/-3.45	5.82	pCi/L
Sodium-22	U	-0.797	+/-3.25	5.94	pCi/L
Thallium-208	U	2.81	+/-4.67	6.59	pCi/L
Thorium-230	U	659	+/-1260	2030	pCi/L
Thorium-234	U	94.0	+/-179	276	pCi/L
Tin-113	U	-1.22	+/-5.12	9.09	pCi/L
Uranium-235	U	4.36	+/-33.2	40.4	pCi/L
Uranium-238	U	94.0	+/-179	276	pCi/L
Yttrium-88	U	3.12	+/-4.84	10.3	pCi/L
Zinc-65	U	-14.8	+/-9.05	12.3	pCi/L
Zirconium-95	U	1.77	+/-8.90	16.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.58	+/-2.55	3.22	5.00	pCi/L	DYT1	04/13/13	1458	1292129	2
Beta		174	+/-10.9	4.53	5.00	pCi/L					
Alpha		3.89	+/-3.01	3.47	5.00	pCi/L	DYT1	04/15/13	0826	1292129	3
Beta		170	+/-10.6	3.93	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	359	+/-123	188	300	pCi/L	MYM1	04/07/13	2259	1291981	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			89.5	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 16	Project:	WNUC00122
Sample ID:	322093007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 14:00		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		3.59	+/-2.64	3.27	5.00	pCi/L		DYT1	04/13/13	1456	1292129	1
Beta		25.7	+/-4.51	3.65	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-65.5	+/-98.1	177	300	pCi/L		MYM1	04/07/13	2315	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 18	Project:	WNUC00122
Sample ID:	322093008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 10:31		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		8.61	+/-1.78	0.570	1.00	pCi/L		JXH2	04/17/13	1533	1295164	1
Uranium-235/236	U	0.231	+/-0.395	0.346	1.00	pCi/L						
Uranium-238		3.64	+/-1.16	0.280	1.00	pCi/L						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	3.56	+/-16.7	27.4		pCi/L		MXR1	04/18/13	0807	1295214	2
Americium-241	U	11.9	+/-14.3	25.3		pCi/L						
Antimony-124	U	20.2	+/-9.20	24.8		pCi/L						
Antimony-125	U	-2.93	+/-9.19	16.2		pCi/L						
Barium-133	U	-1.71	+/-3.88	6.84		pCi/L						
Barium-140	U	11.2	+/-21.9	46.3		pCi/L						
Beryllium-7	U	-6.9	+/-39.1	69.4		pCi/L						
Bismuth-212	U	34.4	+/-46.1	92.1		pCi/L						
Bismuth-214	U	1.03	+/-9.83	15.1		pCi/L						
Cerium-139	U	-0.822	+/-3.03	5.22		pCi/L						
Cerium-141	U	-6.98	+/-11.1	14.9		pCi/L						
Cerium-144	U	13.7	+/-22.3	34.2		pCi/L						
Cesium-134	U	-0.443	+/-3.64	6.72		pCi/L						
Cesium-136	U	16.6	+/-28.1	49.9		pCi/L						
Cesium-137	U	1.59	+/-3.16	5.98	10.0	pCi/L						
Chromium-51	U	6.80	+/-57.5	106		pCi/L						
Cobalt-56	U	-2.39	+/-4.69	8.21		pCi/L						
Cobalt-57	U	-0.54	+/-2.51	4.40		pCi/L						
Cobalt-58	U	0.696	+/-4.23	8.03		pCi/L						
Cobalt-60	U	2.98	+/-3.52	7.52		pCi/L						
Europium-152	U	6.07	+/-9.09	17.3		pCi/L						
Europium-154	U	4.52	+/-8.45	17.9		pCi/L						
Europium-155	U	-0.333	+/-9.26	16.6		pCi/L						
Iridium-192	U	-2.08	+/-3.79	6.68		pCi/L						
Iron-59	U	-1.52	+/-9.54	17.4		pCi/L						
Lead-210	U	-201	+/-509	724		pCi/L						
Lead-212	U	6.24	+/-7.86	12.3		pCi/L						
Lead-214	U	-6.41	+/-8.64	13.7		pCi/L						
Manganese-54	U	0.280	+/-3.23	6.09		pCi/L						
Mercury-203	U	-1.5	+/-4.69	8.43		pCi/L						
Neodymium-147	U	110	+/-167	319		pCi/L						



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## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 18 Project: WNUC00122  
Sample ID: 322093008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	1.42	+/-24.3	43.3	pCi/L
Niobium-94	U	-1.16	+/-3.30	5.94	pCi/L
Niobium-95	U	3.39	+/-4.56	7.47	pCi/L
Potassium-40	U	-10.7	+/-47.0	84.4	pCi/L
Promethium-144	U	0.571	+/-3.68	6.88	pCi/L
Promethium-146	U	1.01	+/-3.91	7.23	pCi/L
Radium-228	U	3.56	+/-16.7	27.4	pCi/L
Ruthenium-106	U	-3.14	+/-32.1	56.5	pCi/L
Silver-110m	U	-0.413	+/-3.13	5.53	pCi/L
Sodium-22	U	1.67	+/-3.02	6.41	pCi/L
Thallium-208	U	1.75	+/-5.35	6.22	pCi/L
Thorium-230	U	717	+/-1640	1770	pCi/L
Thorium-234	U	50.0	+/-154	264	pCi/L
Tin-113	U	-1.48	+/-4.32	7.65	pCi/L
Uranium-235	U	13.9	+/-24.9	30.0	pCi/L
Uranium-238	U	50.0	+/-154	264	pCi/L
Yttrium-88	U	-1.99	+/-4.99	8.89	pCi/L
Zinc-65	U	-0.667	+/-7.59	13.9	pCi/L
Zirconium-95	U	2.97	+/-7.76	15.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	37.2	+/-8.11	4.90	5.00	pCi/L	DYT1	04/13/13	1456	1292129	3
Beta	184	+/-8.83	4.26	5.00	pCi/L					
Alpha	12.3	+/-7.12	8.93	5.00	pCi/L	DYT1	04/15/13	0826	1292129	4
Beta	192	+/-10.6	4.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	177	+/-109	177	300	pCi/L	MYM1	04/07/13	2331	1291981	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 18  
Sample ID: 322093008

Project: WNUC00122  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			81.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 19	Project:	WNUC00122
Sample ID:	322093009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 12:05		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		5.69	+/-2.78	2.75	5.00	pCi/L		DYT1	04/13/13	1458	1292129	1
Beta		4.87	+/-3.09	4.78	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-25.3	+/-94.8	168	300	pCi/L		MYM1	04/07/13	2348	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 20	Project:	WNUC00122
Sample ID:	322093010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 14:20		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	2.03	+/-1.90	2.74	5.00	pCi/L		DYT1	04/13/13	1456	1292129	1
Beta	U	-0.419	+/-2.61	4.85	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-48.9	+/-95.1	170	300	pCi/L		MYM1	04/08/13	0004	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 22	Project:	WNUC00122
Sample ID:	322093011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 10:45		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	9.22	+/-23.8	40.7		pCi/L		MXR1	04/18/13	0808	1295214	1
Americium-241	U	-3.97	+/-6.76	10.5		pCi/L						
Antimony-124	U	5.51	+/-18.7	37.4		pCi/L						
Antimony-125	U	1.60	+/-11.9	21.3		pCi/L						
Barium-133	U	0.233	+/-5.84	9.19		pCi/L						
Barium-140	U	-6.47	+/-31.1	59.5		pCi/L						
Beryllium-7	U	-16.9	+/-54.3	93.0		pCi/L						
Bismuth-212	U	3.24	+/-81.1	134		pCi/L						
Bismuth-214	UI	0.00	+/-16.4	16.4		pCi/L						
Cerium-139	U	-0.353	+/-3.82	6.52		pCi/L						
Cerium-141	U	-6.47	+/-12.0	17.7		pCi/L						
Cerium-144	U	-12.4	+/-24.6	36.7		pCi/L						
Cesium-134	U	2.46	+/-5.16	9.94		pCi/L						
Cesium-136	U	31.3	+/-37.9	77.5		pCi/L						
Cesium-137	U	0.312	+/-5.55	9.89	10.0	pCi/L						
Chromium-51	U	-11.1	+/-72.3	128		pCi/L						
Cobalt-56	U	1.59	+/-6.04	11.4		pCi/L						
Cobalt-57	U	1.32	+/-2.89	5.18		pCi/L						
Cobalt-58	U	-0.942	+/-5.94	10.7		pCi/L						
Cobalt-60	U	-0.951	+/-4.99	9.16		pCi/L						
Europium-152	U	6.03	+/-13.1	22.6		pCi/L						
Europium-154	U	-9.32	+/-15.1	25.8		pCi/L						
Europium-155	U	2.28	+/-9.55	17.1		pCi/L						
Iridium-192	U	3.64	+/-5.25	9.85		pCi/L						
Iron-59	U	-9.52	+/-14.3	24.7		pCi/L						
Lead-210	U	44.5	+/-122	112		pCi/L						
Lead-212	U	5.37	+/-14.4	12.2		pCi/L						
Lead-214	U	0.812	+/-15.0	19.0		pCi/L						
Manganese-54	U	-3.32	+/-4.65	7.75		pCi/L						
Mercury-203	U	1.10	+/-6.24	11.3		pCi/L						
Neodymium-147	U	219	+/-232	466		pCi/L						
Neptunium-239	U	-2.46	+/-28.8	50.2		pCi/L						
Niobium-94	U	-1.42	+/-4.47	7.91		pCi/L						
Niobium-95	U	3.49	+/-6.10	11.9		pCi/L						
Potassium-40	U	41.6	+/-49.8	82.4		pCi/L						
Promethium-144	U	-1.16	+/-4.94	8.79		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 22 Project: WNUC00122  
Sample ID: 322093011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.55	+/-5.91	9.52	pCi/L
Radium-228	U	9.22	+/-23.8	40.7	pCi/L
Ruthenium-106	U	34.2	+/-55.2	69.5	pCi/L
Silver-110m	U	-5.5	+/-4.96	8.09	pCi/L
Sodium-22	U	-2.85	+/-5.31	9.21	pCi/L
Thallium-208	U	0.381	+/-6.58	10.3	pCi/L
Thorium-230	U	706	+/-736	1120	pCi/L
Thorium-234	U	17.4	+/-104	99.6	pCi/L
Tin-113	U	-10.3	+/-5.53	8.02	pCi/L
Uranium-235	U	-0.222	+/-26.8	39.3	pCi/L
Uranium-238	U	17.4	+/-104	99.6	pCi/L
Yttrium-88	U	5.49	+/-6.04	13.8	pCi/L
Zinc-65	U	3.46	+/-11.3	19.6	pCi/L
Zirconium-95	U	6.06	+/-11.2	19.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.92	+/-4.03	4.76	5.00	pCi/L	DYT1	04/13/13	1459	1292129	2
Beta		70.9	+/-7.59	4.92	5.00	pCi/L					
Alpha	U	3.78	+/-3.65	4.88	5.00	pCi/L	DYT1	04/15/13	0826	1292129	3
Beta		68.4	+/-7.44	4.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	25.5	+/-97.8	169	300	pCi/L	MYM1	04/08/13	0020	1291981	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 23R	Project:	WNUC00122
Sample ID:	322093012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 13:20		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		1.77	+/-1.41	1.60	5.00	pCi/L		DYT1	04/13/13	1457	1292129	1
Beta	U	2.07	+/-2.80	4.74	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-29	+/-99.4	176	300	pCi/L		MYM1	04/08/13	0036	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.8	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 24	Project:	WNUC00122
Sample ID:	322093013	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 10:50		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		5.11	+/-2.94	3.36	5.00	pCi/L		DYT1	04/13/13	1457	1292129	1
Beta		5.84	+/-2.89	4.02	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-84.5	+/-94.1	171	300	pCi/L		MYM1	04/08/13	0052	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 26	Project:	WNUC00122
Sample ID:	322093014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 10:30		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.49	+/-1.96	3.23	5.00	pCi/L		DYT1	04/13/13	1459	1292129	1
Beta		14.1	+/-3.34	3.03	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-16.5	+/-96.1	169	300	pCi/L		MYM1	04/08/13	0108	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.4	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 27	Project:	WNUC00122
Sample ID:	322093015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 14:40		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	3.08	+/-2.50	3.23	5.00	pCi/L		DYT1	04/13/13	1457	1292129	1
Beta		12.2	+/-3.32	3.49	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-44.6	+/-101	180	300	pCi/L		MYM1	04/08/13	0124	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.7	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 28	Project:	WNUC00122
Sample ID:	322093016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 11:40		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		14.7	+/-5.36	3.83	5.00	pCi/L		DYT1	04/13/13	1457	1292129	1
Beta		26.7	+/-4.66	3.87	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-73.5	+/-92.6	168	300	pCi/L		MYM1	04/08/13	0141	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 29	Project:	WNUC00122
Sample ID:	322093017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 11:05		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-6.48	+/-19.1	27.9		pCi/L		MXR1	04/18/13	0808	1295214	1
Americium-241	U	-24.4	+/-13.4	22.3		pCi/L						
Antimony-124	U	0.0536	+/-11.7	22.0		pCi/L						
Antimony-125	U	-9.85	+/-9.31	15.4		pCi/L						
Barium-133	U	0.506	+/-4.42	7.95		pCi/L						
Barium-140	U	-5.82	+/-29.2	52.6		pCi/L						
Beryllium-7	U	-1.44	+/-41.2	72.9		pCi/L						
Bismuth-212	U	13.1	+/-47.5	89.1		pCi/L						
Bismuth-214	U	-10.7	+/-10.6	13.5		pCi/L						
Cerium-139	U	0.857	+/-3.88	5.99		pCi/L						
Cerium-141	U	1.54	+/-10.7	17.4		pCi/L						
Cerium-144	U	-3.25	+/-24.3	37.1		pCi/L						
Cesium-134	U	2.88	+/-3.93	7.61		pCi/L						
Cesium-136	U	27.1	+/-27.3	54.0		pCi/L						
Cesium-137	U	0.342	+/-3.38	6.27	10.0	pCi/L						
Chromium-51	U	-49.8	+/-61.7	106		pCi/L						
Cobalt-56	U	3.32	+/-4.73	9.08		pCi/L						
Cobalt-57	U	-2.27	+/-2.69	4.54		pCi/L						
Cobalt-58	U	-1.44	+/-4.56	6.90		pCi/L						
Cobalt-60	U	-1.72	+/-4.02	7.13		pCi/L						
Europium-152	U	-2.01	+/-10.1	17.9		pCi/L						
Europium-154	U	9.86	+/-9.36	19.8		pCi/L						
Europium-155	U	0.749	+/-10.5	18.6		pCi/L						
Iridium-192	U	2.95	+/-4.44	8.23		pCi/L						
Iron-59	U	2.14	+/-11.7	18.7		pCi/L						
Lead-210	U	-204	+/-283	429		pCi/L						
Lead-212	U	8.48	+/-10.9	10.9		pCi/L						
Lead-214	U	-6.14	+/-9.82	14.3		pCi/L						
Manganese-54	U	0.818	+/-3.47	6.47		pCi/L						
Mercury-203	U	3.19	+/-6.04	8.89		pCi/L						
Neodymium-147	U	52.0	+/-195	351		pCi/L						
Neptunium-239	U	-25.9	+/-27.4	46.3		pCi/L						
Niobium-94	U	-0.254	+/-3.43	6.21		pCi/L						
Niobium-95	U	-2.86	+/-4.63	8.02		pCi/L						
Potassium-40	UI	0.00	+/-64.4	61.6		pCi/L						
Promethium-144	U	-1.7	+/-3.61	6.35		pCi/L						

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## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 29 Project: WNUC00122  
Sample ID: 322093017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.209	+/-4.35	7.70	pCi/L
Radium-228	U	-6.48	+/-19.1	27.9	pCi/L
Ruthenium-106	U	22.1	+/-34.5	63.5	pCi/L
Silver-110m	U	0.525	+/-3.47	6.45	pCi/L
Sodium-22	U	3.51	+/-3.34	7.06	pCi/L
Thallium-208	U	1.99	+/-6.03	6.43	pCi/L
Thorium-230	U	533	+/-1040	1580	pCi/L
Thorium-234	U	-99	+/-146	225	pCi/L
Tin-113	U	5.00	+/-6.74	8.20	pCi/L
Uranium-235	U	-20.4	+/-30.2	35.4	pCi/L
Uranium-238	U	-99	+/-146	225	pCi/L
Yttrium-88	U	2.41	+/-4.27	8.85	pCi/L
Zinc-65	U	-5.18	+/-9.53	13.4	pCi/L
Zirconium-95	U	-6.42	+/-8.21	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.7	+/-5.36	7.08	5.00	pCi/L	DYT1	04/15/13	1913	1292130	2
Beta	94.4	+/-7.70	9.34	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	92.1	+/-100	168	300	pCi/L	MYM1	04/08/13	0157	1291981	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 30	Project:	WNUC00122
Sample ID:	322093018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 11:20		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		12.2	+/-1.98	0.503	1.00	pCi/L		MXS2	04/18/13	1120	1295465	1
Uranium-235/236		0.508	+/-0.491	0.305	1.00	pCi/L						
Uranium-238		4.03	+/-1.14	0.247	1.00	pCi/L						
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	18.8	+/-15.3	19.5	5.00	pCi/L		DYT1	04/13/13	1900	1292130	2
Beta		78.1	+/-17.1	16.5	5.00	pCi/L						
Alpha	U	18.2	+/-12.6	20.0	5.00	pCi/L		DYT1	04/15/13	0939	1292130	3
Beta		102	+/-10.6	13.7	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	24.3	+/-108	186	300	pCi/L		MYM1	04/14/13	2005	1293595	4

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	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"			92.0	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.4	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 32	Project:	WNUC00122
Sample ID:	322093019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 12:15		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	9.88	+/-20.5	34.0		pCi/L		MXR1	04/18/13	1113	1295214	1
Americium-241	U	-33.6	+/-30.1	49.9		pCi/L						
Antimony-124	U	-7.61	+/-15.4	22.5		pCi/L						
Antimony-125	U	1.59	+/-9.82	17.8		pCi/L						
Barium-133	U	-0.435	+/-4.37	7.79		pCi/L						
Barium-140	U	-20.1	+/-27.0	46.0		pCi/L						
Beryllium-7	U	-17.3	+/-42.7	73.4		pCi/L						
Bismuth-212	U	37.5	+/-52.7	95.1		pCi/L						
Bismuth-214	UI	0.00	+/-15.2	16.7		pCi/L						
Cerium-139	U	-2.36	+/-3.62	5.90		pCi/L						
Cerium-141	U	-6.64	+/-12.0	17.4		pCi/L						
Cerium-144	U	-3.97	+/-22.0	35.6		pCi/L						
Cesium-134	U	1.47	+/-4.12	7.94		pCi/L						
Cesium-136	U	17.5	+/-18.7	51.8		pCi/L						
Cesium-137	U	-2.44	+/-3.38	5.89	10.0	pCi/L						
Chromium-51	U	-31	+/-61.4	107		pCi/L						
Cobalt-56	U	-0.822	+/-4.98	9.06		pCi/L						
Cobalt-57	U	1.59	+/-3.19	5.31		pCi/L						
Cobalt-58	U	3.42	+/-4.09	8.47		pCi/L						
Cobalt-60	U	0.981	+/-4.54	8.89		pCi/L						
Europium-152	U	-4.94	+/-9.51	16.4		pCi/L						
Europium-154	U	3.76	+/-14.6	24.3		pCi/L						
Europium-155	U	-2.79	+/-11.5	19.7		pCi/L						
Iridium-192	U	2.53	+/-4.07	7.69		pCi/L						
Iron-59	U	6.20	+/-9.47	19.7		pCi/L						
Lead-210	U	-371	+/-1310	1980		pCi/L						
Lead-212	U	1.46	+/-8.63	14.1		pCi/L						
Lead-214	U	-2.55	+/-8.74	13.5		pCi/L						
Manganese-54	U	0.380	+/-3.64	6.87		pCi/L						
Mercury-203	U	0.829	+/-5.89	9.93		pCi/L						
Neodymium-147	U	110	+/-186	352		pCi/L						
Neptunium-239	U	17.7	+/-31.5	55.9		pCi/L						
Niobium-94	U	-1.39	+/-3.34	5.97		pCi/L						
Niobium-95	U	0.837	+/-4.51	8.62		pCi/L						
Potassium-40	U	36.1	+/-61.3	62.0		pCi/L						
Promethium-144	U	0.820	+/-3.96	7.44		pCi/L						

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 32	Project:	WNUC00122
Sample ID:	322093019	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.65	+/-4.35	7.51	pCi/L
Radium-228	U	9.88	+/-20.5	34.0	pCi/L
Ruthenium-106	U	-8.0	+/-32.4	57.7	pCi/L
Silver-110m	U	0.686	+/-3.44	6.57	pCi/L
Sodium-22	U	1.35	+/-5.21	8.65	pCi/L
Thallium-208	U	3.86	+/-5.49	6.87	pCi/L
Thorium-230	U	761	+/-1660	2980	pCi/L
Thorium-234	U	-42.7	+/-296	478	pCi/L
Tin-113	U	-1.89	+/-5.06	8.80	pCi/L
Uranium-235	U	-16.6	+/-27.3	40.8	pCi/L
Uranium-238	U	-42.7	+/-296	478	pCi/L
Yttrium-88	U	0.718	+/-5.49	10.8	pCi/L
Zinc-65	U	-2.02	+/-7.83	14.1	pCi/L
Zirconium-95	U	1.29	+/-8.27	15.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.04	+/-3.65	4.57	5.00	pCi/L	DYT1	04/13/13	1901	1292130	2
Beta		256	+/-12.4	3.40	5.00	pCi/L					
Alpha		8.43	+/-4.39	3.97	5.00	pCi/L	DYT1	04/15/13	0932	1292130	3
Beta		264	+/-9.25	2.47	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	394	+/-112	168	300	pCi/L	MYM1	04/08/13	0229	1291981	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 33	Project:	WNUC00122
Sample ID:	322093020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 11:15		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.96	+/-2.09	3.19	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta		4.28	+/-2.39	3.39	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-23	+/-95.2	168	300	pCi/L		MYM1	04/08/13	0245	1291981	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 37	Project:	WNUC00122
Sample ID:	322093021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 09:00		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.17	+/-1.78	3.15	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta	U	1.88	+/-1.80	2.88	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-28.8	+/-119	211	300	pCi/L		MYM1	04/08/13	0740	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 38	Project:	WNUC00122
Sample ID:	322093022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	28-FEB-13 09:20		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		4.10	+/-2.92	3.53	5.00	pCi/L		DYT1	04/13/13	1859	1292130	1
Beta		5.24	+/-2.80	3.98	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-64.7	+/-113	204	300	pCi/L		MYM1	04/08/13	0756	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL 41R  
Sample ID: 322093023  
Matrix: Water  
Collect Date: 11-MAR-13 09:45  
Receive Date: 19-MAR-13  
Collector: Client

Project: WNUC00122  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		4.51	+/-3.05	3.52	5.00	pCi/L		DYT1	04/13/13	1901	1292130	1
Beta		11.7	+/-3.19	3.14	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-86.7	+/-112	204	300	pCi/L		MYM1	04/08/13	0812	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 48	Project:	WNUC00122
Sample ID:	322093024	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	11-MAR-13 10:05		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	-0.0777	+/-1.22	3.11	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta		10.1	+/-3.51	4.55	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-15.6	+/-114	202	300	pCi/L		MYM1	04/08/13	0829	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID: WELL RW-2  
Sample ID: 322093025  
Matrix: Water  
Collect Date: 11-MAR-13 09:26  
Receive Date: 19-MAR-13  
Collector: Client

Project: WNUC00122  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.91	+/-2.15	3.31	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta		7.72	+/-2.89	3.60	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	12.0	+/-117	204	300	pCi/L		MYM1	04/08/13	0845	1290891	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 900.0/SW846 9310											
2	DOE EML HASL-300, Tc-02-RC Modified											
Surrogate/Tracer Recovery	Test					Result	Nominal	Recovery%	Acceptable Limits			
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"							98.1	(15%-125%)			

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 17	Project:	WNUC00122
Sample ID:	322093026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 10:12		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-17.9	+/-18.9	30.5		pCi/L		MXR1	04/18/13	1114 1295214	1
Americium-241	U	-30.2	+/-30.0	47.4		pCi/L					
Antimony-124	U	5.18	+/-13.6	28.2		pCi/L					
Antimony-125	U	-12.5	+/-9.33	14.3		pCi/L					
Barium-133	U	-2.65	+/-4.53	7.74		pCi/L					
Barium-140	U	-6.54	+/-27.4	52.0		pCi/L					
Beryllium-7	U	32.9	+/-45.2	85.5		pCi/L					
Bismuth-212	U	11.2	+/-48.5	92.3		pCi/L					
Bismuth-214	U	-7.5	+/-9.72	15.0		pCi/L					
Cerium-139	U	-2.4	+/-3.30	5.43		pCi/L					
Cerium-141	U	-2.3	+/-9.96	15.2		pCi/L					
Cerium-144	U	5.85	+/-20.2	36.3		pCi/L					
Cesium-134	U	0.702	+/-4.14	7.76		pCi/L					
Cesium-136	U	-22.2	+/-25.8	43.2		pCi/L					
Cesium-137	U	-0.266	+/-3.91	7.17	10.0	pCi/L					
Chromium-51	U	52.5	+/-59.8	115		pCi/L					
Cobalt-56	U	-1.6	+/-5.15	9.02		pCi/L					
Cobalt-57	U	0.455	+/-2.62	4.70		pCi/L					
Cobalt-58	U	-3.99	+/-4.46	7.20		pCi/L					
Cobalt-60	U	1.15	+/-3.61	7.36		pCi/L					
Europium-152	U	-3.32	+/-10.2	17.8		pCi/L					
Europium-154	U	-0.609	+/-11.4	21.5		pCi/L					
Europium-155	U	3.90	+/-10.8	19.8		pCi/L					
Iridium-192	U	0.738	+/-4.31	7.89		pCi/L					
Iron-59	U	1.51	+/-11.8	22.8		pCi/L					
Lead-210	U	1010	+/-1600	2380		pCi/L					
Lead-212	U	-7.13	+/-8.65	12.7		pCi/L					
Lead-214	U	-1.22	+/-10.0	15.9		pCi/L					
Manganese-54	U	-2.42	+/-4.22	7.14		pCi/L					
Mercury-203	U	1.29	+/-5.39	9.28		pCi/L					
Neodymium-147	U	-37.7	+/-197	361		pCi/L					
Neptunium-239	U	0.396	+/-26.2	46.6		pCi/L					
Niobium-94	U	0.841	+/-3.67	6.86		pCi/L					
Niobium-95	U	-0.224	+/-4.05	7.54		pCi/L					
Potassium-40	U	9.35	+/-52.5	79.8		pCi/L					
Promethium-144	U	-0.347	+/-3.95	7.16		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 17 Project: WNUC00122  
Sample ID: 322093026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.95	+/-4.73	7.87	pCi/L
Radium-228	U	-17.9	+/-18.9	30.5	pCi/L
Ruthenium-106	U	4.43	+/-35.8	66.8	pCi/L
Silver-110m	U	1.40	+/-3.63	7.01	pCi/L
Sodium-22	U	0.228	+/-4.01	7.71	pCi/L
Thallium-208	UI	0.00	+/-5.04	0.584	pCi/L
Thorium-230	U	-74.4	+/-1550	2820	pCi/L
Thorium-234	U	-40.6	+/-258	415	pCi/L
Tin-113	U	1.88	+/-5.59	9.18	pCi/L
Uranium-235	U	-4.56	+/-20.6	31.6	pCi/L
Uranium-238	U	-40.6	+/-258	415	pCi/L
Yttrium-88	U	-4.79	+/-4.35	6.29	pCi/L
Zinc-65	U	2.52	+/-9.70	18.7	pCi/L
Zirconium-95	U	1.20	+/-8.09	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.90	+/-3.69	3.17	5.00	pCi/L	DYT1	04/13/13	1900	1292130	2
Beta	314	+/-14.2	3.48	5.00	pCi/L					
Alpha	U 0.892	+/-2.51	3.72	5.00	pCi/L	DYT1	04/15/13	0932	1292130	3
Beta	307	+/-14.2	3.34	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	441	+/-135	201	300	pCi/L	MYM1	04/08/13	0901	1290891	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)



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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 39	Project:	WNUC00122
Sample ID:	322093027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 14:25		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	2.20	+/-3.00	4.94	5.00	pCi/L		DYT1	04/13/13	1901	1292130	1
Beta		23.7	+/-4.78	4.83	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-6.48	+/-116	204	300	pCi/L		MYM1	04/08/13	0917	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.2	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 40	Project:	WNUC00122
Sample ID:	322093028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	15-MAR-13 09:45		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		4.02	+/-2.78	3.36	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta		5.62	+/-3.10	4.58	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-49.6	+/-114	204	300	pCi/L		MYM1	04/08/13	0933	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 43	Project:	WNUC00122
Sample ID:	322093029	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 14:40		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha		4.74	+/-2.56	2.72	5.00	pCi/L		DYT1	04/13/13	1901	1292130	1
Beta		6.44	+/-3.22	4.78	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-67.2	+/-117	212	300	pCi/L		MYM1	04/08/13	0949	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 44	Project:	WNUC00122
Sample ID:	322093030	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 14:05		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Gross Alpha Liquid "As Received"												
Alpha	U	1.28	+/-1.23	1.62	5.00	pCi/L		DYT1	04/13/13	1900	1292130	1
Beta		8.40	+/-3.30	4.75	5.00	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-76.1	+/-115	210	300	pCi/L		MYM1	04/08/13	1005	1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 46	Project:	WNUC00122
Sample ID:	322093031	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 11:15		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Gross Alpha Liquid "As Received"											
Alpha	U	1.64	+/-2.04	3.28	5.00	pCi/L		DYT1	04/13/13	1859 1292130	1
Beta		37.8	+/-5.31	3.65	5.00	pCi/L					
Rad Liquid Scintillation Analysis											
Liquid Scint Tc99, Liquid "As Received"											
Technetium-99	U	-46.8	+/-115	206	300	pCi/L		MYM1	04/08/13	1021 1290891	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0/SW846 9310	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.1	(15%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: April 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500430628

Client Sample ID:	WELL 47	Project:	WNUC00122
Sample ID:	322093032	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-MAR-13 10:32		
Receive Date:	19-MAR-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.66	+/-16.5	25.5		pCi/L		MXR1	04/18/13	1114 1295214	1
Americium-241	U	9.68	+/-12.1	17.6		pCi/L					
Antimony-124	U	-3.56	+/-11.0	19.9		pCi/L					
Antimony-125	U	-3.38	+/-8.73	14.7		pCi/L					
Barium-133	U	2.62	+/-3.92	6.65		pCi/L					
Barium-140	U	-12.6	+/-29.4	52.2		pCi/L					
Beryllium-7	U	-15	+/-36.3	64.8		pCi/L					
Bismuth-212	U	21.3	+/-42.3	81.7		pCi/L					
Bismuth-214	U	2.79	+/-7.01	12.1		pCi/L					
Cerium-139	U	-0.377	+/-2.86	5.06		pCi/L					
Cerium-141	U	9.64	+/-8.26	15.7		pCi/L					
Cerium-144	U	-4.46	+/-18.4	32.5		pCi/L					
Cesium-134	U	1.47	+/-3.34	6.44		pCi/L					
Cesium-136	U	-10.5	+/-27.2	47.2		pCi/L					
Cesium-137	U	-0.276	+/-3.39	6.16	10.0	pCi/L					
Chromium-51	U	-33.6	+/-54.6	91.6		pCi/L					
Cobalt-56	U	-0.502	+/-5.72	8.36		pCi/L					
Cobalt-57	U	-0.924	+/-2.38	4.18		pCi/L					
Cobalt-58	U	-3.36	+/-5.44	7.77		pCi/L					
Cobalt-60	U	-1.7	+/-4.01	5.88		pCi/L					
Europium-152	U	4.58	+/-8.92	14.6		pCi/L					
Europium-154	U	-2.38	+/-8.72	16.2		pCi/L					
Europium-155	U	4.83	+/-8.94	16.6		pCi/L					
Iridium-192	U	1.06	+/-3.73	6.71		pCi/L					
Iron-59	U	-10.7	+/-9.22	15.0		pCi/L					
Lead-210	U	53.7	+/-326	375		pCi/L					
Lead-212	UI	0.00	+/-10.4	10.7		pCi/L					
Lead-214	U	-2.39	+/-8.26	11.5		pCi/L					
Manganese-54	U	0.989	+/-3.60	5.96		pCi/L					
Mercury-203	U	3.75	+/-5.20	8.56		pCi/L					
Neodymium-147	U	-87.3	+/-181	321		pCi/L					
Neptunium-239	U	4.03	+/-24.5	44.2		pCi/L					
Niobium-94	U	1.46	+/-3.47	5.78		pCi/L					
Niobium-95	U	-2.13	+/-4.81	7.29		pCi/L					
Potassium-40	U	10.0	+/-46.6	75.6		pCi/L					
Promethium-144	U	2.74	+/-3.48	6.03		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: April 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500430628

Client Sample ID: WELL 47 Project: WNUC00122  
Sample ID: 322093032 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.91	+/-3.70	7.10	pCi/L
Radium-228	U	3.66	+/-16.5	25.5	pCi/L
Ruthenium-106	U	-11.6	+/-29.0	51.3	pCi/L
Silver-110m	U	-1.73	+/-3.29	5.73	pCi/L
Sodium-22	U	-0.903	+/-3.10	5.73	pCi/L
Thallium-208	U	-0.0983	+/-4.52	6.91	pCi/L
Thorium-230	U	-742	+/-1200	1620	pCi/L
Thorium-234	U	3.58	+/-142	228	pCi/L
Tin-113	U	-1.19	+/-4.44	7.61	pCi/L
Uranium-235	U	-20.7	+/-20.8	31.0	pCi/L
Uranium-238	U	3.58	+/-142	228	pCi/L
Yttrium-88	U	0.783	+/-4.66	9.15	pCi/L
Zinc-65	U	-8.09	+/-6.57	10.6	pCi/L
Zirconium-95	U	-4.13	+/-7.57	13.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.931	+/-2.14	3.30	5.00	pCi/L	DYT1	04/13/13	1900	1292130	2
Beta		101	+/-8.21	3.15	5.00	pCi/L					
Alpha		3.97	+/-2.90	3.46	5.00	pCi/L	DYT1	04/15/13	0932	1292130	3
Beta		116	+/-8.94	4.56	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	209	+/-135	219	300	pCi/L	MYM1	04/08/13	1037	1290891	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.9	(15%-125%)

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: April 27, 2013  
Page 1 of 11

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

Contact:  
Workorder: 322093

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1295164										
QC1202859105	322093008	DUP									
Uranium-233/234		8.61		6.30	pCi/L	31.0*		(0% - 20%)	JXH2	04/17/13	15:33
	Uncertainty	+/-1.78		+/-1.40							
Uranium-235/236	U	0.231		0.292	pCi/L	17.0		N/A			
	Uncertainty	+/-0.395		+/-0.384							
Uranium-238		3.64		3.15	pCi/L	14.5		(0% - 20%)			
	Uncertainty	+/-1.16		+/-0.988							
QC1202859106	LCS										
Uranium-233/234				21.6	pCi/L					04/17/13	15:33
	Uncertainty			+/-3.48							
Uranium-235/236			U	0.751	pCi/L						
	Uncertainty			+/-1.11							
Uranium-238		27.0		26.5	pCi/L		97.9	(75%-125%)			
	Uncertainty			+/-3.77							
QC1202859104	MB										
Uranium-233/234			U	0.103	pCi/L					04/17/13	15:33
	Uncertainty			+/-0.637							
Uranium-235/236			U	0.0343	pCi/L						
	Uncertainty			+/-0.359							
Uranium-238			U	0.282	pCi/L						
	Uncertainty			+/-0.499							
Batch	1295465										
QC1202859913	322093018	DUP									
Uranium-233/234		12.2		11.2	pCi/L	8.23		(0% - 20%)	MXS2	04/18/13	11:20
	Uncertainty	+/-1.98		+/-1.90							
Uranium-235/236		0.508		0.510	pCi/L	0.382		(0% - 100%)			
	Uncertainty	+/-0.491		+/-0.492							
Uranium-238		4.03		2.97	pCi/L	30.2*		(0% - 20%)			
	Uncertainty	+/-1.14		+/-0.985							
QC1202859914	LCS										
Uranium-233/234				25.7	pCi/L					04/18/13	11:20
	Uncertainty			+/-2.92							
Uranium-235/236			U	0.664	pCi/L						
	Uncertainty			+/-0.733							
Uranium-238		27.0		26.6	pCi/L		98.3	(75%-125%)			
	Uncertainty			+/-2.94							
QC1202859912	MB										
Uranium-233/234			U	-0.242	pCi/L					04/18/13	11:20
	Uncertainty			+/-0.674							
Uranium-235/236			U	-0.11	pCi/L						
	Uncertainty			+/-0.332							
Uranium-238			U	-0.267	pCi/L						
	Uncertainty			+/-0.304							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1295214										
QC1202859200 322093002 DUP											
Actinium-228	U	23.5	U	-4.2	pCi/L	0.00			N/A	MXR1	04/19/13 08:15
	Uncertainty	+/-25.1		+/-17.2							
Americium-241	U	35.2	U	5.88	pCi/L	0.00			N/A		
	Uncertainty	+/-34.7		+/-31.2							
Antimony-124	U	-1.48	U	-6.93	pCi/L	0.00			N/A		
	Uncertainty	+/-12.7		+/-13.5							
Antimony-125	U	-0.726	U	3.20	pCi/L	0.00			N/A		
	Uncertainty	+/-10.4		+/-9.93							
Barium-133	U	-3.22	U	-1.86	pCi/L	0.00			N/A		
	Uncertainty	+/-4.97		+/-5.06							
Barium-140	U	10.6	U	-20.6	pCi/L	0.00			N/A		
	Uncertainty	+/-27.3		+/-30.4							
Beryllium-7	U	-17.6	U	8.78	pCi/L	0.00			N/A		
	Uncertainty	+/-46.3		+/-41.6							
Bismuth-212	U	15.0	U	47.6	pCi/L	0.00			N/A		
	Uncertainty	+/-53.3		+/-53.0							
Bismuth-214	U	6.17	U	10.2	pCi/L	0.00			N/A		
	Uncertainty	+/-15.9		+/-13.0							
Cerium-139	U	0.212	U	-1.46	pCi/L	0.00			N/A		
	Uncertainty	+/-4.19		+/-3.32							
Cerium-141	U	-4.77	U	-1.62	pCi/L	0.00			N/A		
	Uncertainty	+/-12.5		+/-9.93							
Cerium-144	U	-22.1	U	-19.4	pCi/L	0.00			N/A		
	Uncertainty	+/-26.8		+/-21.4							
Cesium-134	U	0.0578	U	0.785	pCi/L	0.00			N/A		
	Uncertainty	+/-3.98		+/-4.23							
Cesium-136	U	-18.1	U	2.97	pCi/L	0.00			N/A		
	Uncertainty	+/-28.1		+/-32.1							
Cesium-137	U	5.17	U	3.52	pCi/L	0.00			N/A		
	Uncertainty	+/-4.23		+/-3.01							
Chromium-51	U	-74.6	U	-16	pCi/L	0.00			N/A		
	Uncertainty	+/-77.6		+/-64.6							
Cobalt-56	U	-6.37	U	-4.52	pCi/L	0.00			N/A		
	Uncertainty	+/-5.37		+/-5.45							
Cobalt-57	U	1.30	U	-1.32	pCi/L	0.00			N/A		
	Uncertainty	+/-3.09		+/-2.74							
Cobalt-58	U	-0.146	U	1.44	pCi/L	0.00			N/A		
	Uncertainty	+/-4.54		+/-4.36							
Cobalt-60	U	3.10	U	-0.737	pCi/L	0.00			N/A		
	Uncertainty	+/-4.36		+/-5.31							
Europium-152	U	-0.835	U	-0.798	pCi/L	0.00			N/A		
	Uncertainty	+/-13.3		+/-9.32							
Europium-154	U	6.00	U	2.84	pCi/L	0.00			N/A		
	Uncertainty	+/-10.7		+/-12.0							
Europium-155	U	-15.2	U	10.4	pCi/L	0.00			N/A		

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1295214										
	Uncertainty										
		+/-13.7		+/-11.0							
Iridium-192	U	3.98	U	-0.0693	pCi/L	0.00		N/A	MXR1	04/19/13	08:15
	Uncertainty	+/-4.98		+/-4.49							
Iron-59	U	-1.24	U	-1.47	pCi/L	0.00		N/A			
	Uncertainty	+/-12.6		+/-10.9							
Lead-210	U	622	U	-516	pCi/L	0.00		N/A			
	Uncertainty	+/-1310		+/-1660							
Lead-212	U	-7.68	U	1.00	pCi/L	0.00		N/A			
	Uncertainty	+/-10.3		+/-11.1							
Lead-214	U	3.58	U	0.937	pCi/L	0.00		N/A			
	Uncertainty	+/-10.6		+/-9.69							
Manganese-54	U	1.80	U	-0.135	pCi/L	0.00		N/A			
	Uncertainty	+/-3.96		+/-3.81							
Mercury-203	U	0.318	U	-2.04	pCi/L	0.00		N/A			
	Uncertainty	+/-5.98		+/-5.11							
Neodymium-147	U	-41.4	U	217	pCi/L	0.00		N/A			
	Uncertainty	+/-210		+/-213							
Neptunium-239	U	26.8	U	-5.84	pCi/L	0.00		N/A			
	Uncertainty	+/-31.0		+/-26.4							
Niobium-94	U	2.90	U	-2.18	pCi/L	0.00		N/A			
	Uncertainty	+/-4.40		+/-3.57							
Niobium-95	U	2.48	U	7.43	pCi/L	0.00		N/A			
	Uncertainty	+/-5.28		+/-5.08							
Potassium-40	U	38.6	U	-43.5	pCi/L	0.00		N/A			
	Uncertainty	+/-59.3		+/-60.4							
Promethium-144	U	1.86	U	-2.36	pCi/L	0.00		N/A			
	Uncertainty	+/-4.65		+/-4.20							
Promethium-146	U	0.048	U	2.82	pCi/L	0.00		N/A			
	Uncertainty	+/-4.44		+/-4.49							
Radium-228	U	23.5	U	-4.2	pCi/L	0.00		N/A			
	Uncertainty	+/-25.1		+/-17.2							
Ruthenium-106	U	-8.62	U	0.970	pCi/L	0.00		N/A			
	Uncertainty	+/-36.2		+/-36.0							
Silver-110m	U	-4.41	U	2.11	pCi/L	0.00		N/A			
	Uncertainty	+/-4.28		+/-3.84							
Sodium-22	U	2.14	U	0.659	pCi/L	0.00		N/A			
	Uncertainty	+/-3.83		+/-4.34							
Thallium-208	U	-0.895	U	-2.36	pCi/L	0.00		N/A			
	Uncertainty	+/-5.77		+/-5.52							
Thorium-230	U	-112	U	-177	pCi/L	0.00		N/A			
	Uncertainty	+/-1870		+/-1620							
Thorium-234	U	279	U	31.2	pCi/L	0.00		N/A			
	Uncertainty	+/-377		+/-342							
Tin-113	U	-1.23	U	-3.09	pCi/L	0.00		N/A			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1295214										
	Uncertainty										
		+/-5.34		+/-5.20							
Uranium-235	U	-15.4	U	9.53	pCi/L	0.00			N/A MXR1	04/19/13	08:15
	Uncertainty	+/-26.4		+/-23.6							
Uranium-238	U	279	U	31.2	pCi/L	0.00			N/A		
	Uncertainty	+/-377		+/-342							
Yttrium-88	U	1.81	U	2.42	pCi/L	0.00			N/A		
	Uncertainty	+/-5.34		+/-5.22							
Zinc-65	U	0.621	U	-5.31	pCi/L	0.00			N/A		
	Uncertainty	+/-9.32		+/-9.56							
Zirconium-95	U	-3.28	U	2.59	pCi/L	0.00			N/A		
	Uncertainty	+/-10.8		+/-9.38							
QC1202859201	LCS										
Actinium-228			U	-170	pCi/L					04/18/13	13:20
	Uncertainty			+/-351							
Americium-241	11000			10200	pCi/L		92	(75%-125%)			
	Uncertainty			+/-279							
Antimony-124			U	1.45	pCi/L						
	Uncertainty			+/-51.9							
Antimony-125			U	33.3	pCi/L						
	Uncertainty			+/-173							
Barium-133			U	15.9	pCi/L						
	Uncertainty			+/-67.9							
Barium-140			U	6.31	pCi/L						
	Uncertainty			+/-30.2							
Beryllium-7			U	154	pCi/L						
	Uncertainty			+/-534							
Bismuth-212			U	530	pCi/L						
	Uncertainty			+/-771							
Bismuth-214			U	-2.58	pCi/L						
	Uncertainty			+/-107							
Cerium-139			U	37.5	pCi/L						
	Uncertainty			+/-39.3							
Cerium-141			U	-18.6	pCi/L						
	Uncertainty			+/-58.2							
Cerium-144			U	119	pCi/L						
	Uncertainty			+/-279							
Cesium-134			U	-9.83	pCi/L						
	Uncertainty			+/-68.1							
Cesium-136			U	31.9	pCi/L						
	Uncertainty			+/-121							
Cesium-137	23900			23500	pCi/L		98.2	(75%-125%)			
	Uncertainty			+/-287							
Chromium-51			U	168	pCi/L						
	Uncertainty			+/-540							
Cobalt-56			U	1.18	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1295214										
	Uncertainty			+/-66.5							
Cobalt-57				566	pCi/L				MXR1	04/18/13	13:20
	Uncertainty			+/-58.4							
Cobalt-58			U	47.8	pCi/L						
	Uncertainty			+/-61.4							
Cobalt-60	21200			20400	pCi/L		96.3	(75%-125%)			
	Uncertainty			+/-315							
Europium-152			U	61.9	pCi/L						
	Uncertainty			+/-153							
Europium-154			U	-29.4	pCi/L						
	Uncertainty			+/-109							
Europium-155			U	-31.5	pCi/L						
	Uncertainty			+/-123							
Iridium-192			U	0.717	pCi/L						
	Uncertainty			+/-56.2							
Iron-59			U	57.6	pCi/L						
	Uncertainty			+/-149							
Lead-210				95800	pCi/L						
	Uncertainty			+/-7110							
Lead-212			U	43.5	pCi/L						
	Uncertainty			+/-87.4							
Lead-214			U	88.9	pCi/L						
	Uncertainty			+/-117							
Manganese-54			U	-27.4	pCi/L						
	Uncertainty			+/-63.1							
Mercury-203			U	17.1	pCi/L						
	Uncertainty			+/-46.7							
Neodymium-147			U	-79.6	pCi/L						
	Uncertainty			+/-400							
Neptunium-239			U	-168	pCi/L						
	Uncertainty			+/-383							
Niobium-94			U	16.4	pCi/L						
	Uncertainty			+/-50.9							
Niobium-95			U	45.7	pCi/L						
	Uncertainty			+/-58.7							
Potassium-40			U	-37.5	pCi/L						
	Uncertainty			+/-264							
Promethium-144			U	24.1	pCi/L						
	Uncertainty			+/-50.1							
Promethium-146			U	20.0	pCi/L						
	Uncertainty			+/-86.0							
Radium-228			U	-170	pCi/L						
	Uncertainty			+/-351							
Ruthenium-106			U	379	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1295214										
	Uncertainty			+/-494							
Silver-110m				933	pCi/L				MXR1	04/18/13	13:20
	Uncertainty			+/-82.2							
Sodium-22			U	-9.86	pCi/L						
	Uncertainty			+/-38.2							
Thallium-208			U	54.1	pCi/L						
	Uncertainty			+/-55.3							
Thorium-230			U	6560	pCi/L						
	Uncertainty			+/-10700							
Thorium-234			U	-530	pCi/L						
	Uncertainty			+/-1370							
Tin-113			U	50.0	pCi/L						
	Uncertainty			+/-71.8							
Uranium-235			U	104	pCi/L						
	Uncertainty			+/-248							
Uranium-238			U	-530	pCi/L						
	Uncertainty			+/-1370							
Yttrium-88				84.0	pCi/L						
	Uncertainty			+/-36.1							
Zinc-65			U	35.8	pCi/L						
	Uncertainty			+/-157							
Zirconium-95			U	-90	pCi/L						
	Uncertainty			+/-104							
QC1202859199	MB										
Actinium-228			U	20.4	pCi/L					04/19/13	08:15
	Uncertainty			+/-23.5							
Americium-241			U	17.1	pCi/L						
	Uncertainty			+/-23.2							
Antimony-124			U	3.27	pCi/L						
	Uncertainty			+/-8.18							
Antimony-125			U	1.88	pCi/L						
	Uncertainty			+/-9.90							
Barium-133			U	-2.21	pCi/L						
	Uncertainty			+/-4.52							
Barium-140			U	2.59	pCi/L						
	Uncertainty			+/-5.87							
Beryllium-7			U	4.42	pCi/L						
	Uncertainty			+/-32.1							
Bismuth-212			U	31.9	pCi/L						
	Uncertainty			+/-55.8							
Bismuth-214			U	13.2	pCi/L						
	Uncertainty			+/-9.23							
Cerium-139			U	2.03	pCi/L						
	Uncertainty			+/-3.70							
Cerium-141			U	-0.0695	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1295214										
	Uncertainty			+/-5.43							
Cerium-144			U	-9.8	pCi/L				MXR1	04/19/13	08:15
	Uncertainty			+/-20.8							
Cesium-134			U	1.73	pCi/L						
	Uncertainty			+/-4.86							
Cesium-136			U	-1.42	pCi/L						
	Uncertainty			+/-5.84							
Cesium-137			U	-1.33	pCi/L						
	Uncertainty			+/-3.89							
Chromium-51			U	32.4	pCi/L						
	Uncertainty			+/-29.4							
Cobalt-56			U	0.353	pCi/L						
	Uncertainty			+/-4.05							
Cobalt-57			U	-0.661	pCi/L						
	Uncertainty			+/-2.46							
Cobalt-58			U	-2.84	pCi/L						
	Uncertainty			+/-3.69							
Cobalt-60			U	7.80	pCi/L						
	Uncertainty			+/-4.77							
Europium-152			U	4.17	pCi/L						
	Uncertainty			+/-10.5							
Europium-154			U	-10.2	pCi/L						
	Uncertainty			+/-11.9							
Europium-155			U	-4.63	pCi/L						
	Uncertainty			+/-13.4							
Iridium-192			U	-2.13	pCi/L						
	Uncertainty			+/-3.33							
Iron-59			U	0.976	pCi/L						
	Uncertainty			+/-6.67							
Lead-210			U	-497	pCi/L						
	Uncertainty			+/-801							
Lead-212			U	9.62	pCi/L						
	Uncertainty			+/-9.13							
Lead-214			U	-3.26	pCi/L						
	Uncertainty			+/-9.74							
Manganese-54			U	1.74	pCi/L						
	Uncertainty			+/-3.92							
Mercury-203			U	-0.201	pCi/L						
	Uncertainty			+/-3.34							
Neodymium-147			U	1.35	pCi/L						
	Uncertainty			+/-32.4							
Neptunium-239			U	20.1	pCi/L						
	Uncertainty			+/-29.8							
Niobium-94			U	-1.13	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1295214										
	Uncertainty			+/-4.04							
Niobium-95			U	1.32	pCi/L				MXR1	04/19/13	08:15
	Uncertainty			+/-4.48							
Potassium-40			U	24.0	pCi/L						
	Uncertainty			+/-85.8							
Promethium-144			U	0.125	pCi/L						
	Uncertainty			+/-3.93							
Promethium-146			U	0.531	pCi/L						
	Uncertainty			+/-4.85							
Radium-228			U	20.4	pCi/L						
	Uncertainty			+/-23.5							
Ruthenium-106			U	-22.6	pCi/L						
	Uncertainty			+/-34.9							
Silver-110m			U	1.06	pCi/L						
	Uncertainty			+/-3.63							
Sodium-22			U	-2.23	pCi/L						
	Uncertainty			+/-4.01							
Thallium-208			U	0.445	pCi/L						
	Uncertainty			+/-6.38							
Thorium-230			U	1610	pCi/L						
	Uncertainty			+/-2040							
Thorium-234			U	-271	pCi/L						
	Uncertainty			+/-249							
Tin-113			U	-0.647	pCi/L						
	Uncertainty			+/-5.41							
Uranium-235			U	0.0399	pCi/L						
	Uncertainty			+/-26.0							
Uranium-238			U	-271	pCi/L						
	Uncertainty			+/-249							
Yttrium-88			U	2.22	pCi/L						
	Uncertainty			+/-3.96							
Zinc-65			U	-5.64	pCi/L						
	Uncertainty			+/-9.70							
Zirconium-95			U	-1.42	pCi/L						
	Uncertainty			+/-6.12							
<b>Rad Gas Flow</b>											
Batch	1292129										
QC1202851541	322093003	DUP									
Alpha	U	4.04	U	3.80	pCi/L	0.00			N/A	DYT1	04/13/13 14:59
	Uncertainty	+/-3.39		+/-3.36							
Beta		79.8		94.1	pCi/L	16.4		(0% - 20%)			
	Uncertainty	+/-7.63		+/-8.28							
QC1202851542	LCS										
Alpha	123			136	pCi/L		110	(75%-125%)			04/13/13 14:59
	Uncertainty			+/-14.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1292129										
Beta	492			550	pCi/L		112	(75%-125%)			
	Uncertainty			+/-20.2							
QC1202851540	MB										
Alpha			U	-0.525	pCi/L				DYT1	04/13/13	14:57
	Uncertainty			+/-1.21							
Beta			U	0.833	pCi/L						
	Uncertainty			+/-2.17							
Batch	1292130										
QC1202851544	322093017	DUP									
Alpha		12.7	U	6.67	pCi/L	62.5		(0% - 100%)	DYT1	04/15/13	19:13
	Uncertainty	+/-5.36		+/-9.24							
Beta		94.4		99.0	pCi/L	4.74		(0% - 20%)			
	Uncertainty	+/-7.70		+/-7.79							
QC1202851545	LCS										
Alpha		123		129	pCi/L		104	(75%-125%)		04/13/13	19:00
	Uncertainty			+/-12.5							
Beta		492		547	pCi/L		111	(75%-125%)			
	Uncertainty			+/-19.6							
QC1202851543	MB										
Alpha			U	-0.0618	pCi/L					04/13/13	19:00
	Uncertainty			+/-1.27							
Beta			U	-0.0537	pCi/L						
	Uncertainty			+/-2.55							
<b>Rad Liquid Scintillation</b>											
Batch	1290891										
QC1202848375	322093021	DUP									
Technetium-99		U	-28.8	U	-51	pCi/L	0.00		N/AMYM1	04/08/13	11:10
	Uncertainty		+/-119		+/-117						
QC1202848376	LCS										
Technetium-99		5790		5530	pCi/L		95.5	(75%-125%)		04/08/13	11:26
	Uncertainty			+/-290							
QC1202848374	MB										
Technetium-99			U	-15.5	pCi/L					04/08/13	10:54
	Uncertainty			+/-114							
Batch	1291981										
QC1202851169	322093001	DUP									
Technetium-99		U	26.6	U	-55.6	pCi/L	0.00		N/AMYM1	04/08/13	03:17
	Uncertainty		+/-102		+/-94.1						
QC1202851170	LCS										
Technetium-99		5790		5750	pCi/L		99.3	(75%-125%)		04/08/13	03:34
	Uncertainty			+/-240							
QC1202851168	MB										
Technetium-99			U	-65	pCi/L					04/08/13	03:01
	Uncertainty			+/-101							
Batch	1293595										
QC1202855218	322093002	DUP									
Technetium-99		222	U	124	pCi/L	56.7		(0% - 100%)	MYM1	04/14/13	20:47



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## QC Summary

Workorder: 322093

Page 10 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1293595										
		Uncertainty									
			+/-114	+/-114							
QC1202855219	LCS										
Technetium-99		5790		5660	pCi/L		97.8	(75%-125%)	MYM1	04/14/13	21:08
		Uncertainty		+/-243							
QC1202855217	MB										
Technetium-99			U	-136	pCi/L					04/14/13	20:26
		Uncertainty		+/-131							

### 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 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, 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

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## QC Summary

Workorder: 322093

Page 11 of 11

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.

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 27 April 2013**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP A2LA ISO 17025	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Nevada	SC000122011-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-8
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



July 09, 2013

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

Re: Environmental - PO 4500467846  
Work Order: 327663

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 14, 2013. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500467846  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

327663

VENDOR: General Engineering Laboratories (GEL)Month: JuneYear: 2013

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	6/12/13 09:22	1000	X	X	X		X	REC
WELL	#3A	6/13/13 09:40	1000	X	X	X		X	REC
WELL	#7	6/10/13 13:47	1000	X	X	X		X	REC
WELL	#10	6/11/13 08:33	1000	X	X	X		X	REC
WELL	#13R	6/10/13 12:00	1000	X	X	X		X	REC
WELL	#14	6/11/13 11:50	1000	X	X	X		X	REC
WELL	#15	6/11/13 10:34	1000	X	X	X		X	REC
WELL	#16	6/11/13 14:08	1000	X	X	X		X	REC
WELL	#17	6/10/13 11:00	1000	X	X	X		X	REC
WELL	#18	6/10/13 10:30	1000	X	X	X		X	REC
WELL	#20	6/11/13 10:58	1000	X	X	X		X	REC
WELL	#22	6/10/13 09:55	1000	X	X	X		X	REC
WELL	#23R	6/11/13 11:22	1000	X	X	X		X	REC
WELL	#24	6/11/13 09:20	1000	X	X	X		X	REC
WELL	#26	6/12/13 10:33	1000	X	X	X		X	REC
WELL	#27	6/11/13 14:25	1000	X	X	X		X	REC
WELL	#28	6/10/13 11:30	1000	X	X	X		X	REC
WELL	#29	6/10/13 09:20	1000	X	X	X		X	REC
WELL	#30	6/10/13 09:39	1000	X	X	X		X	REC
WELL	#32	6/11/13 08:52	1000	X	X	X		X	REC
WELL	#33	6/11/13 09:42	1000	X	X	X		X	REC
WELL	#39	6/11/13 13:30	1000	X	X	X		X	REC
WELL	#41R	6/12/13 09:45	1000	X	X	X		X	REC
WELL	#43	6/11/13 13:50	1000	X	X	X		X	REC
WELL	#44	6/11/13 10:10	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 6/13/13

Rec: *Mike K...* 6-14-13 09:15  
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# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

## Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

327663

VENDOR: General Engineering Laboratories (GEL)

Month: June

Year: 2013

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

[illegible]

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: **Randy Crews** *R. Crews* Date Shipped: **6/13/13**

Mr. Kato 6-14-13 0928  
Printed Copies are Uncontrolled

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>327663</u>	
Received By: <u>NK</u>		Date Received: <u>6-14-13</u>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input type="checkbox"/> <input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>CPD</u>	
Classified Radioactive II or III by RSO?	<input type="checkbox"/> <input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input type="checkbox"/> <input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input type="checkbox"/> <input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input type="checkbox"/> <input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____	
Samples identified as Foreign Soil?	<input type="checkbox"/> <input checked="" type="checkbox"/>		

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 type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>24°C</u>
2a	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>41502182</u> Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
7	Are Encore containers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other
14	Carrier and tracking number.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>17222 210 03 9822 5452</u> <u>24°C</u> <u>9709 4042</u> <u>24°C</u>

Comments (Use Continuation Form if needed):



## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 327663 GEL Work Order: 327663

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 327663001  
Matrix: Ground Water  
Collect Date: 12-JUN-13 09:22  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.20	+/-17.9	28.8		pCi/L		MXR1	06/27/13	0903 1308459	1
Americium-241	U	-0.546	+/-28.7	45.4		pCi/L					
Antimony-124	U	0.275	+/-10.0	19.6		pCi/L					
Antimony-125	U	4.00	+/-8.47	16.0		pCi/L					
Barium-133	U	-0.717	+/-4.34	7.69		pCi/L					
Barium-140	U	-3.2	+/-10.6	19.5		pCi/L					
Beryllium-7	U	-7.29	+/-32.3	56.5		pCi/L					
Bismuth-212	U	39.8	+/-48.7	98.1		pCi/L					
Bismuth-214	U	6.86	+/-14.5	12.0		pCi/L					
Cerium-139	U	-2.47	+/-3.36	5.44		pCi/L					
Cerium-141	U	-9.19	+/-7.05	11.1		pCi/L					
Cerium-144	U	14.9	+/-22.1	39.4		pCi/L					
Cesium-134	U	4.84	+/-4.16	7.97		pCi/L					
Cesium-136	U	1.29	+/-8.86	17.1		pCi/L					
Cesium-137	U	2.93	+/-3.66	7.33	10.0	pCi/L					
Chromium-51	U	-9.38	+/-41.5	64.3		pCi/L					
Cobalt-56	U	-2.91	+/-3.88	6.60		pCi/L					
Cobalt-57	U	0.421	+/-2.73	4.76		pCi/L					
Cobalt-58	U	0.852	+/-4.04	7.67		pCi/L					
Cobalt-60	U	-0.0398	+/-4.18	8.05		pCi/L					
Europium-152	U	4.77	+/-10.1	18.2		pCi/L					
Europium-154	U	5.52	+/-12.3	24.1		pCi/L					
Europium-155	U	1.54	+/-14.5	20.1		pCi/L					
Iridium-192	U	3.98	+/-4.01	6.47		pCi/L					
Iron-59	U	-0.712	+/-9.05	16.5		pCi/L					
Lead-210	U	-287	+/-1230	1930		pCi/L					
Lead-212	U	9.14	+/-7.75	13.2		pCi/L					
Lead-214	U	-12.9	+/-9.54	13.8		pCi/L					
Manganese-54	U	0.521	+/-4.40	7.18		pCi/L					
Mercury-203	U	0.0252	+/-3.93	7.10		pCi/L					
Neodymium-147	U	0.403	+/-56.3	101		pCi/L					
Neptunium-239	U	-11.6	+/-30.9	49.5		pCi/L					
Niobium-94	U	-0.729	+/-3.45	6.27		pCi/L					
Niobium-95	U	3.50	+/-3.48	7.37		pCi/L					
Potassium-40	U	32.0	+/-60.3	66.3		pCi/L					
Promethium-144	U	1.73	+/-3.50	6.78		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 327663001

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.07	+/-3.94	7.28	pCi/L
Radium-228	U	1.20	+/-17.9	28.8	pCi/L
Ruthenium-106	U	-14.7	+/-30.0	53.8	pCi/L
Silver-110m	U	-1.86	+/-3.48	6.17	pCi/L
Sodium-22	U	2.30	+/-4.30	8.49	pCi/L
Thallium-208	U	1.36	+/-6.01	6.86	pCi/L
Thorium-230	U	-95	+/-1790	2800	pCi/L
Thorium-234	U	49.7	+/-413	463	pCi/L
Tin-113	U	0.389	+/-4.55	8.22	pCi/L
Uranium-235	U	2.95	+/-26.5	42.2	pCi/L
Uranium-238	U	49.7	+/-413	463	pCi/L
Yttrium-88	U	0.0415	+/-3.49	7.11	pCi/L
Zinc-65	U	6.41	+/-6.78	13.6	pCi/L
Zirconium-95	U	-1.36	+/-7.02	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.690	+/-1.67	3.31	5.00	pCi/L	DYT1	06/28/13	1510	1310080	2
Beta		7.81	+/-3.13	4.36	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	27.8	+/-107	184	300	pCi/L	MYM1	07/02/13	1752	1308613	3
---------------	---	------	--------	-----	-----	-------	------	----------	------	---------	---

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 3A	Project:	WNUC00124
Sample ID:	327663002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUN-13 09:40		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.96	+/-15.9	27.6		pCi/L		MXR1	06/27/13	0903 1308459	1
Americium-241	U	-12.5	+/-27.8	49.1		pCi/L					
Antimony-124	U	-3.4	+/-9.85	18.2		pCi/L					
Antimony-125	U	8.55	+/-19.0	16.4		pCi/L					
Barium-133	U	-1.38	+/-4.76	7.36		pCi/L					
Barium-140	U	-8.37	+/-10.3	17.3		pCi/L					
Beryllium-7	U	3.57	+/-31.9	58.4		pCi/L					
Bismuth-212	U	-4.0	+/-52.3	97.3		pCi/L					
Bismuth-214	U	2.88	+/-9.84	16.7		pCi/L					
Cerium-139	U	-2.16	+/-2.77	4.54		pCi/L					
Cerium-141	U	4.86	+/-6.10	11.2		pCi/L					
Cerium-144	U	-5.26	+/-20.6	35.5		pCi/L					
Cesium-134	U	0.942	+/-3.55	6.97		pCi/L					
Cesium-136	U	-2.99	+/-8.53	15.3		pCi/L					
Cesium-137	U	-1.02	+/-3.43	6.30	10.0	pCi/L					
Chromium-51	U	-36.1	+/-37.6	63.5		pCi/L					
Cobalt-56	U	4.48	+/-3.90	8.27		pCi/L					
Cobalt-57	U	0.503	+/-2.57	4.58		pCi/L					
Cobalt-58	U	0.301	+/-4.18	7.87		pCi/L					
Cobalt-60	U	6.25	+/-4.61	9.23		pCi/L					
Europium-152	U	-2.48	+/-9.61	17.2		pCi/L					
Europium-154	U	-8.22	+/-10.3	17.7		pCi/L					
Europium-155	U	-12.1	+/-10.8	17.7		pCi/L					
Iridium-192	U	2.44	+/-3.46	6.64		pCi/L					
Iron-59	U	-6.09	+/-7.74	12.7		pCi/L					
Lead-210	U	718	+/-1250	2370		pCi/L					
Lead-212	U	1.41	+/-9.59	11.2		pCi/L					
Lead-214	U	12.8	+/-15.5	13.2		pCi/L					
Manganese-54	U	-1.87	+/-3.59	6.32		pCi/L					
Mercury-203	U	-5.5	+/-4.24	6.35		pCi/L					
Neodymium-147	U	-28.4	+/-50.8	86.2		pCi/L					
Neptunium-239	U	1.97	+/-27.1	48.1		pCi/L					
Niobium-94	U	-0.722	+/-3.27	6.02		pCi/L					
Niobium-95	U	-0.502	+/-3.75	6.97		pCi/L					
Potassium-40	U	38.4	+/-67.0	54.8		pCi/L					
Promethium-144	U	-0.717	+/-3.60	6.61		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 327663002

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.99	+/-4.48	8.41	pCi/L
Radium-228	U	-4.96	+/-15.9	27.6	pCi/L
Ruthenium-106	U	11.0	+/-34.0	62.8	pCi/L
Silver-110m	U	-1.43	+/-3.27	5.92	pCi/L
Sodium-22	U	-2.83	+/-3.64	6.29	pCi/L
Thallium-208	U	0.444	+/-5.52	7.06	pCi/L
Thorium-230	U	-1570	+/-1910	2910	pCi/L
Thorium-234	U	-36.6	+/-269	433	pCi/L
Tin-113	U	2.70	+/-4.92	9.25	pCi/L
Uranium-235	U	13.3	+/-23.3	37.9	pCi/L
Uranium-238	U	-36.6	+/-269	433	pCi/L
Yttrium-88	U	-0.203	+/-4.80	9.30	pCi/L
Zinc-65	U	-3.06	+/-7.32	10.8	pCi/L
Zirconium-95	U	8.79	+/-6.74	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.65	+/-2.46	3.78	5.00	pCi/L	DYT1	06/28/13	1510	1310080	2
Beta	U	1.25	+/-2.85	4.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	20.6	+/-108	187	300	pCi/L	MYM1	07/02/13	1808	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	327663003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUN-13 13:47		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.77	+/-22.2	37.7		pCi/L		MXR1	06/27/13	0903 1308459	1
Americium-241	U	-12.8	+/-20.9	35.8		pCi/L					
Antimony-124	U	-4.14	+/-11.1	20.4		pCi/L					
Antimony-125	U	-9.75	+/-10.5	16.8		pCi/L					
Barium-133	U	1.79	+/-5.48	8.77		pCi/L					
Barium-140	U	-1.47	+/-12.3	23.6		pCi/L					
Beryllium-7	U	-0.86	+/-41.9	70.4		pCi/L					
Bismuth-212	U	-18.3	+/-65.8	104		pCi/L					
Bismuth-214	UI	0.00	+/-15.5	18.9		pCi/L					
Cerium-139	U	-0.975	+/-3.57	6.38		pCi/L					
Cerium-141	U	-0.14	+/-9.56	14.4		pCi/L					
Cerium-144	U	0.764	+/-24.8	42.3		pCi/L					
Cesium-134	U	-0.558	+/-4.60	8.01		pCi/L					
Cesium-136	U	2.61	+/-11.1	21.9		pCi/L					
Cesium-137	U	6.67	+/-5.91	7.14	10.0	pCi/L					
Chromium-51	U	-6.39	+/-54.0	82.7		pCi/L					
Cobalt-56	U	0.844	+/-4.61	8.53		pCi/L					
Cobalt-57	U	-2.15	+/-3.28	5.41		pCi/L					
Cobalt-58	U	4.84	+/-4.47	8.37		pCi/L					
Cobalt-60	U	3.23	+/-4.07	8.65		pCi/L					
Europium-152	U	0.0427	+/-12.5	22.0		pCi/L					
Europium-154	U	-2.97	+/-11.5	21.1		pCi/L					
Europium-155	U	7.03	+/-13.2	23.4		pCi/L					
Iridium-192	U	-0.342	+/-5.27	8.08		pCi/L					
Iron-59	U	-3.77	+/-7.94	14.2		pCi/L					
Lead-210	U	-451	+/-715	1130		pCi/L					
Lead-212	U	-5.18	+/-9.45	14.9		pCi/L					
Lead-214	U	13.2	+/-18.6	18.4		pCi/L					
Manganese-54	U	0.773	+/-4.24	7.81		pCi/L					
Mercury-203	U	-4.82	+/-5.88	8.55		pCi/L					
Neodymium-147	U	4.58	+/-77.4	136		pCi/L					
Neptunium-239	U	7.41	+/-34.7	60.1		pCi/L					
Niobium-94	U	0.521	+/-3.85	7.08		pCi/L					
Niobium-95	U	-0.434	+/-4.26	7.70		pCi/L					
Potassium-40	U	-20.4	+/-57.5	102		pCi/L					
Promethium-144	U	-2.05	+/-4.69	6.90		pCi/L					

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 7 Project: WNUC00124  
Sample ID: 327663003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.875	+/-5.37	9.23	pCi/L
Radium-228	U	3.77	+/-22.2	37.7	pCi/L
Ruthenium-106	U	55.7	+/-40.7	75.9	pCi/L
Silver-110m	U	-0.32	+/-4.35	6.83	pCi/L
Sodium-22	U	-0.977	+/-4.08	7.48	pCi/L
Thallium-208	U	-3.33	+/-5.45	8.80	pCi/L
Thorium-230	U	-1120	+/-1540	2450	pCi/L
Thorium-234	U	-112	+/-223	340	pCi/L
Tin-113	U	3.21	+/-5.52	10.1	pCi/L
Uranium-235	U	-26.1	+/-33.8	43.8	pCi/L
Uranium-238	U	-112	+/-223	340	pCi/L
Yttrium-88	U	2.12	+/-4.62	9.92	pCi/L
Zinc-65	U	-2.83	+/-9.23	16.7	pCi/L
Zirconium-95	U	-1.05	+/-7.44	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.24	+/-2.75	4.43	5.00	pCi/L	DYT1	06/28/13	1510	1310080	2
Beta		102	+/-8.03	4.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	178	+/-117	190	300	pCi/L	MYM1	07/02/13	1824	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	327663004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 08:33		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.79	+/-20.5	33.8		pCi/L		MXR1	06/27/13	0904 1308459	1
Americium-241	U	13.8	+/-27.8	44.8		pCi/L					
Antimony-124	U	4.70	+/-9.85	21.0		pCi/L					
Antimony-125	U	8.53	+/-10.5	20.4		pCi/L					
Barium-133	U	-10.8	+/-6.34	7.79		pCi/L					
Barium-140	U	-6.06	+/-13.3	19.6		pCi/L					
Beryllium-7	U	-15.1	+/-39.0	68.7		pCi/L					
Bismuth-212	U	-4.2	+/-75.2	115		pCi/L					
Bismuth-214	U	7.95	+/-15.2	17.8		pCi/L					
Cerium-139	U	0.397	+/-3.41	6.12		pCi/L					
Cerium-141	U	6.59	+/-7.86	14.2		pCi/L					
Cerium-144	U	-21.6	+/-22.0	37.6		pCi/L					
Cesium-134	U	2.46	+/-4.04	8.10		pCi/L					
Cesium-136	U	-5.15	+/-11.1	19.5		pCi/L					
Cesium-137	U	-0.516	+/-4.32	7.68	10.0	pCi/L					
Chromium-51	U	3.42	+/-44.1	77.6		pCi/L					
Cobalt-56	U	2.20	+/-5.15	8.80		pCi/L					
Cobalt-57	U	1.28	+/-3.05	5.61		pCi/L					
Cobalt-58	U	-2.56	+/-3.54	6.16		pCi/L					
Cobalt-60	U	0.965	+/-4.13	8.01		pCi/L					
Europium-152	U	-11.1	+/-14.6	20.4		pCi/L					
Europium-154	U	-13	+/-13.0	20.5		pCi/L					
Europium-155	U	8.40	+/-15.9	22.1		pCi/L					
Iridium-192	U	-0.875	+/-4.14	7.11		pCi/L					
Iron-59	U	4.11	+/-8.33	16.8		pCi/L					
Lead-210	U	87.9	+/-1040	1670		pCi/L					
Lead-212	U	3.13	+/-12.4	16.7		pCi/L					
Lead-214	U	-14	+/-11.4	16.2		pCi/L					
Manganese-54	U	1.68	+/-4.15	7.58		pCi/L					
Mercury-203	U	1.58	+/-4.57	8.18		pCi/L					
Neodymium-147	U	-34.2	+/-74.9	118		pCi/L					
Neptunium-239	U	26.0	+/-37.6	57.0		pCi/L					
Niobium-94	U	-2.34	+/-4.03	6.79		pCi/L					
Niobium-95	U	4.14	+/-4.20	8.39		pCi/L					
Potassium-40	U	53.8	+/-64.4	118		pCi/L					
Promethium-144	U	-0.146	+/-4.00	7.14		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 10 Project: WNUC00124  
Sample ID: 327663004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.298	+/-4.92	9.00	pCi/L
Radium-228	U	-6.79	+/-20.5	33.8	pCi/L
Ruthenium-106	U	-8.35	+/-35.8	63.3	pCi/L
Silver-110m	U	-0.751	+/-4.11	7.26	pCi/L
Sodium-22	U	-4.52	+/-4.59	7.28	pCi/L
Thallium-208	U	-1.19	+/-5.64	9.15	pCi/L
Thorium-230	U	58.8	+/-1850	2850	pCi/L
Thorium-234	U	199	+/-297	381	pCi/L
Tin-113	U	-0.596	+/-5.12	9.31	pCi/L
Uranium-235	U	-0.374	+/-31.3	45.4	pCi/L
Uranium-238	U	199	+/-297	381	pCi/L
Yttrium-88	U	1.52	+/-4.74	9.74	pCi/L
Zinc-65	U	-4.23	+/-10.1	16.2	pCi/L
Zirconium-95	U	-1.44	+/-7.66	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.83	+/-2.03	3.06	5.00	pCi/L	DYT1	06/28/13	1508	1310080	2
Beta		53.9	+/-6.07	4.10	5.00	pCi/L					
Alpha		5.13	+/-3.18	3.43	5.00	pCi/L	DYT1	06/30/13	1546	1310080	3
Beta		45.6	+/-5.00	4.05	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	43.6	+/-109	188	300	pCi/L	MYM1	07/02/13	1841	1308613	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 327663004

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 327663005  
Matrix: Ground Water  
Collect Date: 10-JUN-13 12:00  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.9	+/-14.7	24.3		pCi/L		MXR1	06/27/13	0905 1308459	1
Americium-241	U	-0.196	+/-17.8	28.0		pCi/L					
Antimony-124	U	-1.9	+/-9.03	17.1		pCi/L					
Antimony-125	U	-3.82	+/-8.99	15.7		pCi/L					
Barium-133	U	-2.79	+/-4.36	7.54		pCi/L					
Barium-140	U	-0.0924	+/-11.7	19.4		pCi/L					
Beryllium-7	U	3.28	+/-33.2	60.2		pCi/L					
Bismuth-212	U	30.7	+/-59.9	100		pCi/L					
Bismuth-214	U	2.36	+/-11.7	13.5		pCi/L					
Cerium-139	U	-1.38	+/-3.16	5.35		pCi/L					
Cerium-141	U	10.5	+/-10.1	11.7		pCi/L					
Cerium-144	U	-16.2	+/-22.2	37.3		pCi/L					
Cesium-134	U	0.215	+/-3.50	6.60		pCi/L					
Cesium-136	U	-2.59	+/-11.6	20.9		pCi/L					
Cesium-137	U	4.15	+/-5.76	6.79	10.0	pCi/L					
Chromium-51	U	-4.97	+/-39.5	71.0		pCi/L					
Cobalt-56	U	1.87	+/-4.64	7.81		pCi/L					
Cobalt-57	U	2.00	+/-2.87	5.17		pCi/L					
Cobalt-58	U	-2.23	+/-3.75	6.25		pCi/L					
Cobalt-60	U	0.651	+/-3.57	6.86		pCi/L					
Europium-152	U	8.16	+/-9.34	18.6		pCi/L					
Europium-154	U	2.47	+/-10.3	19.9		pCi/L					
Europium-155	U	3.29	+/-11.2	19.9		pCi/L					
Iridium-192	U	0.561	+/-3.65	6.67		pCi/L					
Iron-59	U	7.17	+/-8.01	16.4		pCi/L					
Lead-210	U	-48.7	+/-458	718		pCi/L					
Lead-212	U	-9.07	+/-7.89	12.3		pCi/L					
Lead-214	U	2.36	+/-8.90	14.7		pCi/L					
Manganese-54	U	-2.95	+/-2.95	4.92		pCi/L					
Mercury-203	U	3.89	+/-4.11	7.80		pCi/L					
Neodymium-147	U	12.4	+/-60.0	110		pCi/L					
Neptunium-239	U	-9.59	+/-29.5	50.8		pCi/L					
Niobium-94	U	0.641	+/-3.66	6.56		pCi/L					
Niobium-95	U	-0.364	+/-4.19	7.36		pCi/L					
Potassium-40	U	24.7	+/-71.1	66.3		pCi/L					
Promethium-144	U	1.56	+/-3.43	6.36		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 327663005

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.8	+/-4.60	8.00	pCi/L
Radium-228	U	10.9	+/-14.7	24.3	pCi/L
Ruthenium-106	U	4.85	+/-31.9	57.8	pCi/L
Silver-110m	U	0.966	+/-3.61	5.83	pCi/L
Sodium-22	U	0.928	+/-3.65	7.04	pCi/L
Thallium-208	U	-0.195	+/-4.67	7.03	pCi/L
Thorium-230	U	377	+/-1590	2010	pCi/L
Thorium-234	U	46.6	+/-170	274	pCi/L
Tin-113	U	-0.0655	+/-5.03	9.02	pCi/L
Uranium-235	U	32.3	+/-31.0	36.8	pCi/L
Uranium-238	U	46.6	+/-170	274	pCi/L
Yttrium-88	U	-2.0	+/-5.42	8.17	pCi/L
Zinc-65	U	-0.218	+/-7.86	14.5	pCi/L
Zirconium-95	U	-3.34	+/-7.24	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		3.01	+/-2.34	2.88	5.00	pCi/L	DYT1	06/28/13	1508	1310080	2
Beta		130	+/-9.06	4.23	5.00	pCi/L					
Alpha	U	2.89	+/-2.44	3.50	5.00	pCi/L	DYT1	06/30/13	1546	1310080	3
Beta		113	+/-7.39	4.29	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99		353	+/-157	254	300	pCi/L	MYM1	07/07/13	1225	1312313	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 327663005

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 14  
Sample ID: 327663006  
Matrix: Ground Water  
Collect Date: 11-JUN-13 11:50  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-6.81	+/-13.5	22.9		pCi/L		MXR1	06/27/13	0905	1308459	1
Americium-241	U	-6.76	+/-15.2	24.2		pCi/L						
Antimony-124	U	-0.118	+/-7.86	15.5		pCi/L						
Antimony-125	U	-3.92	+/-7.97	13.8		pCi/L						
Barium-133	U	0.378	+/-4.61	7.41		pCi/L						
Barium-140	U	-8.26	+/-10.0	13.7		pCi/L						
Beryllium-7	U	-30.9	+/-30.7	50.0		pCi/L						
Bismuth-212	U	0.834	+/-45.4	85.0		pCi/L						
Bismuth-214	U	-0.0959	+/-8.71	14.2		pCi/L						
Cerium-139	U	-1.43	+/-2.90	4.91		pCi/L						
Cerium-141	U	-5.17	+/-6.72	9.90		pCi/L						
Cerium-144	U	-1.91	+/-19.6	34.2		pCi/L						
Cesium-134	U	1.52	+/-3.17	6.31		pCi/L						
Cesium-136	U	-2.7	+/-8.79	15.7		pCi/L						
Cesium-137	U	3.82	+/-3.41	6.77	10.0	pCi/L						
Chromium-51	U	-12.6	+/-38.7	60.3		pCi/L						
Cobalt-56	U	0.839	+/-3.64	6.93		pCi/L						
Cobalt-57	U	0.796	+/-2.32	4.20		pCi/L						
Cobalt-58	U	-0.175	+/-3.20	5.99		pCi/L						
Cobalt-60	U	-1.67	+/-3.54	6.39		pCi/L						
Europium-152	U	-0.38	+/-9.11	16.5		pCi/L						
Europium-154	U	15.6	+/-8.58	19.6		pCi/L						
Europium-155	U	4.12	+/-10.1	18.4		pCi/L						
Iridium-192	U	-0.383	+/-3.86	6.13		pCi/L						
Iron-59	U	7.24	+/-8.24	16.7		pCi/L						
Lead-210	U	-277	+/-484	698		pCi/L						
Lead-212	U	0.983	+/-8.57	11.7		pCi/L						
Lead-214	U	9.12	+/-12.8	14.9		pCi/L						
Manganese-54	U	0.830	+/-3.43	5.81		pCi/L						
Mercury-203	U	-1.61	+/-4.80	7.40		pCi/L						
Neodymium-147	U	21.5	+/-58.9	97.7		pCi/L						
Neptunium-239	U	20.8	+/-33.8	48.6		pCi/L						
Niobium-94	U	-0.123	+/-3.30	6.10		pCi/L						
Niobium-95	U	-2.14	+/-4.93	7.47		pCi/L						
Potassium-40	U	50.2	+/-59.7	54.8		pCi/L						
Promethium-144	U	0.670	+/-3.40	6.41		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 14  
Sample ID: 327663006

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.912	+/-4.03	7.12	pCi/L
Radium-228	U	-6.81	+/-13.5	22.9	pCi/L
Ruthenium-106	U	-18.1	+/-29.3	48.7	pCi/L
Silver-110m	U	-2.36	+/-3.01	4.86	pCi/L
Sodium-22	UI	0.00	+/-3.03	5.17	pCi/L
Thallium-208	U	-2.27	+/-4.52	7.29	pCi/L
Thorium-230	UI	0.00	+/-1460	1820	pCi/L
Thorium-234	U	69.7	+/-202	264	pCi/L
Tin-113	U	2.87	+/-4.19	7.98	pCi/L
Uranium-235	U	13.1	+/-24.7	29.8	pCi/L
Uranium-238	U	69.7	+/-202	264	pCi/L
Yttrium-88	U	-4.53	+/-4.11	6.18	pCi/L
Zinc-65	U	-7.88	+/-8.93	11.7	pCi/L
Zirconium-95	U	-2.69	+/-6.31	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.821	+/-1.64	3.15	5.00	pCi/L	DYT1	06/28/13	1507	1310080	2
Beta	U	3.98	+/-2.91	4.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	0.00	+/-105	183	300	pCi/L	MYM1	07/02/13	1914	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 327663007  
Matrix: Ground Water  
Collect Date: 11-JUN-13 10:34  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.50	+/-13.0	23.9		pCi/L		MXR1	06/27/13	0906 1308459	1
Americium-241	U	-4.87	+/-12.9	19.1		pCi/L					
Antimony-124	U	-1.46	+/-7.19	13.6		pCi/L					
Antimony-125	U	-0.0117	+/-8.37	14.7		pCi/L					
Barium-133	U	3.54	+/-3.61	6.29		pCi/L					
Barium-140	U	3.66	+/-6.13	13.7		pCi/L					
Beryllium-7	U	10.1	+/-26.7	51.2		pCi/L					
Bismuth-212	U	43.7	+/-42.1	80.5		pCi/L					
Bismuth-214		24.8	+/-13.3	11.2		pCi/L					
Cerium-139	U	1.11	+/-2.51	4.60		pCi/L					
Cerium-141	U	4.90	+/-6.50	10.8		pCi/L					
Cerium-144	U	5.02	+/-17.7	32.2		pCi/L					
Cesium-134	U	3.82	+/-3.40	6.92		pCi/L					
Cesium-136	U	1.76	+/-8.98	16.9		pCi/L					
Cesium-137	U	1.42	+/-3.18	6.09	10.0	pCi/L					
Chromium-51	U	-7.8	+/-34.2	59.2		pCi/L					
Cobalt-56	U	1.45	+/-3.61	6.85		pCi/L					
Cobalt-57	U	-0.864	+/-2.25	3.98		pCi/L					
Cobalt-58	U	-1.41	+/-3.09	5.41		pCi/L					
Cobalt-60	U	-1.1	+/-3.06	5.60		pCi/L					
Europium-152	U	0.235	+/-8.39	14.8		pCi/L					
Europium-154	U	0.978	+/-8.55	16.7		pCi/L					
Europium-155	U	-1.04	+/-8.84	15.9		pCi/L					
Iridium-192	U	-1.34	+/-3.21	5.48		pCi/L					
Iron-59	U	-3.28	+/-6.56	11.2		pCi/L					
Lead-210	U	-122	+/-280	428		pCi/L					
Lead-212	U	-1.86	+/-6.22	10.2		pCi/L					
Lead-214	U	4.33	+/-7.61	11.5		pCi/L					
Manganese-54	U	-0.00651	+/-2.92	5.36		pCi/L					
Mercury-203	U	-1.02	+/-3.27	5.67		pCi/L					
Neodymium-147	U	-27.9	+/-51.6	90.9		pCi/L					
Neptunium-239	U	-17.4	+/-26.1	41.5		pCi/L					
Niobium-94	U	-1.46	+/-3.10	5.41		pCi/L					
Niobium-95	U	1.82	+/-3.60	6.88		pCi/L					
Potassium-40	U	30.9	+/-39.1	57.7		pCi/L					
Promethium-144	U	-6.31	+/-4.96	5.44		pCi/L					



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 327663007

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.844	+/-3.52	6.35	pCi/L
Radium-228	U	1.50	+/-13.0	23.9	pCi/L
Ruthenium-106	U	-1.26	+/-26.9	49.3	pCi/L
Silver-110m	U	-2.16	+/-2.91	4.96	pCi/L
Sodium-22	U	0.323	+/-3.01	5.90	pCi/L
Thallium-208	U	-2.35	+/-3.74	5.71	pCi/L
Thorium-230	U	426	+/-1170	1390	pCi/L
Thorium-234	U	-106	+/-126	216	pCi/L
Tin-113	U	1.06	+/-4.00	7.19	pCi/L
Uranium-235	U	1.51	+/-19.8	32.6	pCi/L
Uranium-238	U	-106	+/-126	216	pCi/L
Yttrium-88	U	-0.498	+/-3.80	7.15	pCi/L
Zinc-65	U	-7.68	+/-8.77	11.4	pCi/L
Zirconium-95	U	-0.854	+/-6.00	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.707	+/-1.20	2.20	5.00	pCi/L	DYT1	06/28/13	1508	1310080	2
Beta		145	+/-9.51	4.80	5.00	pCi/L					
Alpha		4.08	+/-2.45	2.73	5.00	pCi/L	DYT1	06/30/13	1546	1310080	3
Beta		143	+/-8.59	4.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	377	+/-122	185	300	pCi/L	MYM1	07/02/13	1930	1308613	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 327663007

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 16	Project:	WNUC00124
Sample ID:	327663008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 14:08		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.20	+/-17.8	30.3		pCi/L		MXR1	06/27/13	0937 1308459	1
Americium-241	U	-5.52	+/-20.1	35.5		pCi/L					
Antimony-124	U	9.83	+/-9.52	20.2		pCi/L					
Antimony-125	U	-6.18	+/-10.7	18.5		pCi/L					
Barium-133	U	-3.39	+/-5.34	9.24		pCi/L					
Barium-140	U	-1.47	+/-8.08	15.5		pCi/L					
Beryllium-7	U	-21.5	+/-39.8	68.4		pCi/L					
Bismuth-212	U	45.5	+/-64.4	108		pCi/L					
Bismuth-214	U	-6.42	+/-12.0	16.4		pCi/L					
Cerium-139	U	-4.05	+/-3.66	6.02		pCi/L					
Cerium-141	U	-1.7	+/-9.16	13.8		pCi/L					
Cerium-144	U	20.0	+/-25.7	43.3		pCi/L					
Cesium-134	U	1.18	+/-5.38	8.42		pCi/L					
Cesium-136	U	-3.84	+/-12.0	18.2		pCi/L					
Cesium-137	U	-0.64	+/-4.32	7.57	10.0	pCi/L					
Chromium-51	U	41.7	+/-52.2	86.8		pCi/L					
Cobalt-56	U	1.09	+/-4.91	9.14		pCi/L					
Cobalt-57	U	0.371	+/-3.24	5.71		pCi/L					
Cobalt-58	U	2.59	+/-4.32	8.40		pCi/L					
Cobalt-60	U	2.39	+/-3.84	7.75		pCi/L					
Europium-152	U	-3.54	+/-12.6	21.7		pCi/L					
Europium-154	U	5.55	+/-10.1	20.3		pCi/L					
Europium-155	U	-9.75	+/-12.6	21.4		pCi/L					
Iridium-192	U	-1.63	+/-4.39	7.76		pCi/L					
Iron-59	U	-2.35	+/-7.88	14.2		pCi/L					
Lead-210	U	431	+/-699	883		pCi/L					
Lead-212	U	-13.1	+/-9.95	13.6		pCi/L					
Lead-214	U	-11	+/-11.7	17.0		pCi/L					
Manganese-54	U	0.435	+/-4.19	7.77		pCi/L					
Mercury-203	U	-2.09	+/-6.06	9.50		pCi/L					
Neodymium-147	U	-25.4	+/-67.9	118		pCi/L					
Neptunium-239	U	11.5	+/-32.6	58.2		pCi/L					
Niobium-94	U	-1.1	+/-4.07	7.02		pCi/L					
Niobium-95	U	2.13	+/-5.07	9.21		pCi/L					
Potassium-40	U	35.6	+/-67.8	59.4		pCi/L					
Promethium-144	U	2.87	+/-4.13	7.68		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 16	Project:	WNUC00124
Sample ID:	327663008	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.67	+/-4.83	8.87	pCi/L
Radium-228	U	1.20	+/-17.8	30.3	pCi/L
Ruthenium-106	U	17.0	+/-36.1	66.8	pCi/L
Silver-110m	U	0.659	+/-4.03	7.24	pCi/L
Sodium-22	U	1.55	+/-3.58	7.12	pCi/L
Thallium-208	U	-5.62	+/-5.31	7.90	pCi/L
Thorium-230	UI	0.00	+/-1500	2200	pCi/L
Thorium-234	U	-142	+/-206	296	pCi/L
Tin-113	U	1.89	+/-5.38	9.86	pCi/L
Uranium-235	U	9.30	+/-34.4	39.6	pCi/L
Uranium-238	U	-142	+/-206	296	pCi/L
Yttrium-88	U	2.19	+/-3.91	8.43	pCi/L
Zinc-65	U	1.49	+/-8.07	13.5	pCi/L
Zirconium-95	U	5.31	+/-8.40	15.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.81	+/-2.60	2.84	5.00	pCi/L	DYT1	06/28/13	1507	1310080	2
Beta	19.2	+/-3.98	4.30	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	52.0	+/-106	182	300	pCi/L	MYM1	07/02/13	1946	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			102	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 327663009  
Matrix: Ground Water  
Collect Date: 10-JUN-13 11:00  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.03	+/-20.2	25.3		pCi/L		MXR1	06/27/13	1314 1308459	1
Americium-241	U	-5.41	+/-30.9	48.1		pCi/L					
Antimony-124	U	1.46	+/-12.9	17.4		pCi/L					
Antimony-125	U	2.91	+/-10.2	18.6		pCi/L					
Barium-133	U	0.552	+/-4.84	7.73		pCi/L					
Barium-140	U	4.80	+/-11.3	21.1		pCi/L					
Beryllium-7	U	-18.2	+/-34.9	59.3		pCi/L					
Bismuth-212	U	41.3	+/-49.6	99.8		pCi/L					
Bismuth-214	U	2.16	+/-13.8	14.0		pCi/L					
Cerium-139	U	-1.57	+/-3.20	5.28		pCi/L					
Cerium-141	U	3.49	+/-7.07	12.5		pCi/L					
Cerium-144	U	22.1	+/-21.6	39.3		pCi/L					
Cesium-134	U	1.55	+/-3.79	7.39		pCi/L					
Cesium-136	U	-7.54	+/-12.5	21.4		pCi/L					
Cesium-137	U	1.21	+/-3.87	7.39	10.0	pCi/L					
Chromium-51	U	2.37	+/-41.5	75.0		pCi/L					
Cobalt-56	U	-1.39	+/-4.37	7.81		pCi/L					
Cobalt-57	U	0.366	+/-2.66	4.63		pCi/L					
Cobalt-58	U	-0.15	+/-3.76	7.02		pCi/L					
Cobalt-60	U	-2.54	+/-4.16	7.38		pCi/L					
Europium-152	U	6.84	+/-10.1	19.0		pCi/L					
Europium-154	U	-1.5	+/-10.5	16.7		pCi/L					
Europium-155	U	-7.35	+/-13.8	21.0		pCi/L					
Iridium-192	U	-0.787	+/-3.87	6.85		pCi/L					
Iron-59	U	-2.92	+/-8.05	14.3		pCi/L					
Lead-210	U	-658	+/-1180	1790		pCi/L					
Lead-212	U	1.40	+/-12.7	13.3		pCi/L					
Lead-214	U	5.65	+/-11.0	16.3		pCi/L					
Manganese-54	U	3.42	+/-3.46	7.12		pCi/L					
Mercury-203	U	5.32	+/-4.09	7.97		pCi/L					
Neodymium-147	U	0.525	+/-64.3	115		pCi/L					
Neptunium-239	U	-7.02	+/-30.9	52.5		pCi/L					
Niobium-94	U	3.13	+/-4.64	5.54		pCi/L					
Niobium-95	U	5.15	+/-4.02	8.40		pCi/L					
Potassium-40	U	-27.2	+/-53.4	95.0		pCi/L					
Promethium-144	U	-0.715	+/-4.26	6.71		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 17 Project: WNUC00124  
Sample ID: 327663009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.28	+/-4.25	7.06	pCi/L
Radium-228	U	3.03	+/-20.2	25.3	pCi/L
Ruthenium-106	U	-29.2	+/-31.9	54.6	pCi/L
Silver-110m	U	1.61	+/-3.65	7.05	pCi/L
Sodium-22	U	-0.681	+/-3.69	5.79	pCi/L
Thallium-208	U	5.66	+/-6.43	6.67	pCi/L
Thorium-230	U	1430	+/-1850	3050	pCi/L
Thorium-234	U	20.3	+/-445	458	pCi/L
Tin-113	U	-1.66	+/-4.39	7.64	pCi/L
Uranium-235	U	-16.1	+/-26.1	39.6	pCi/L
Uranium-238	U	20.3	+/-445	458	pCi/L
Yttrium-88	U	0.872	+/-4.78	9.55	pCi/L
Zinc-65	U	3.08	+/-8.03	14.1	pCi/L
Zirconium-95	U	-0.978	+/-6.84	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.465	+/-1.43	3.00	5.00	pCi/L	DYT1	06/28/13	1507	1310080	2
Beta		264	+/-12.4	4.48	5.00	pCi/L					
Alpha		2.63	+/-1.88	2.15	5.00	pCi/L	DYT1	06/30/13	1546	1310080	3
Beta		230	+/-10.6	4.80	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	598	+/-132	188	300	pCi/L	MYM1	07/02/13	2003	1308613	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 327663009

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 327663010  
Matrix: Ground Water  
Collect Date: 10-JUN-13 10:30  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.3	+/-16.5	28.8		pCi/L		MXR1	06/27/13	1314 1308459	1
Americium-241	U	1.91	+/-29.4	53.5		pCi/L					
Antimony-124	U	-6.79	+/-11.0	19.0		pCi/L					
Antimony-125	U	-8.11	+/-8.96	14.8		pCi/L					
Barium-133	U	-3.6	+/-4.39	7.45		pCi/L					
Barium-140	U	1.50	+/-12.7	24.9		pCi/L					
Beryllium-7	U	-8.82	+/-34.7	61.0		pCi/L					
Bismuth-212	U	7.10	+/-48.2	92.4		pCi/L					
Bismuth-214	U	8.06	+/-11.5	13.2		pCi/L					
Cerium-139	U	-0.563	+/-3.04	5.20		pCi/L					
Cerium-141	U	-2.24	+/-6.70	11.4		pCi/L					
Cerium-144	U	10.4	+/-20.3	36.7		pCi/L					
Cesium-134	U	-0.677	+/-4.03	7.44		pCi/L					
Cesium-136	U	4.79	+/-9.14	19.2		pCi/L					
Cesium-137	U	1.49	+/-3.50	6.92	10.0	pCi/L					
Chromium-51	U	46.9	+/-54.2	75.3		pCi/L					
Cobalt-56	U	-0.198	+/-3.72	7.01		pCi/L					
Cobalt-57	U	1.85	+/-2.65	4.88		pCi/L					
Cobalt-58	U	2.81	+/-3.82	7.83		pCi/L					
Cobalt-60	U	-0.739	+/-3.98	7.57		pCi/L					
Europium-152	U	14.5	+/-9.70	19.7		pCi/L					
Europium-154	U	-2.59	+/-10.3	19.7		pCi/L					
Europium-155	U	2.99	+/-11.3	20.3		pCi/L					
Iridium-192	U	-0.589	+/-4.17	6.60		pCi/L					
Iron-59	U	-0.0352	+/-7.07	13.6		pCi/L					
Lead-210	U	1270	+/-1240	2410		pCi/L					
Lead-212	U	-0.846	+/-7.74	12.2		pCi/L					
Lead-214	U	0.278	+/-10.1	16.3		pCi/L					
Manganese-54	U	1.33	+/-3.27	6.52		pCi/L					
Mercury-203	U	2.67	+/-4.50	7.80		pCi/L					
Neodymium-147	U	-22.7	+/-64.3	112		pCi/L					
Neptunium-239	U	23.1	+/-26.5	49.5		pCi/L					
Niobium-94	U	-0.897	+/-3.20	5.86		pCi/L					
Niobium-95	U	1.24	+/-3.72	7.33		pCi/L					
Potassium-40	U	47.6	+/-75.7	87.5		pCi/L					
Promethium-144	U	-2.13	+/-3.63	6.41		pCi/L					



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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 18 Project: WNUC00124  
Sample ID: 327663010 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.876	+/-4.48	7.94	pCi/L
Radium-228	U	-4.3	+/-16.5	28.8	pCi/L
Ruthenium-106	U	9.38	+/-34.9	64.1	pCi/L
Silver-110m	U	0.669	+/-3.38	6.53	pCi/L
Sodium-22	U	-0.916	+/-3.65	6.94	pCi/L
Thallium-208	U	1.01	+/-4.83	8.15	pCi/L
Thorium-230	U	-1480	+/-1820	2750	pCi/L
Thorium-234	U	-216	+/-259	395	pCi/L
Tin-113	U	0.779	+/-4.76	8.74	pCi/L
Uranium-235	U	4.10	+/-20.4	36.1	pCi/L
Uranium-238	U	-216	+/-259	395	pCi/L
Yttrium-88	U	2.09	+/-5.56	11.3	pCi/L
Zinc-65	U	1.10	+/-7.03	12.3	pCi/L
Zirconium-95	U	7.01	+/-5.88	13.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	18.6	+/-4.99	4.90	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta	184	+/-7.45	4.98	5.00	pCi/L					
Alpha	8.48	+/-4.03	4.94	5.00	pCi/L	DYT1	07/01/13	1928	1310080	3
Beta	168	+/-7.13	4.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	369	+/-131	201	300	pCi/L	MYM1	07/02/13	2019	1308613	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.4	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 327663010

Project: WNUC00124  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	327663011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 10:58		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.69	+/-22.2	30.7		pCi/L		MXR1	06/27/13	1314 1308459	1
Americium-241	U	-14.2	+/-21.9	37.3		pCi/L					
Antimony-124	U	15.7	+/-13.3	27.7		pCi/L					
Antimony-125	U	0.982	+/-11.1	19.6		pCi/L					
Barium-133	U	0.186	+/-5.92	9.13		pCi/L					
Barium-140	U	-0.67	+/-13.9	22.8		pCi/L					
Beryllium-7	U	21.1	+/-51.3	71.6		pCi/L					
Bismuth-212	U	19.5	+/-64.8	109		pCi/L					
Bismuth-214	U	1.57	+/-15.1	18.5		pCi/L					
Cerium-139	U	-4.48	+/-3.44	5.82		pCi/L					
Cerium-141	U	-0.848	+/-7.90	13.3		pCi/L					
Cerium-144	U	-15.3	+/-24.5	40.3		pCi/L					
Cesium-134	U	-1.96	+/-4.56	7.86		pCi/L					
Cesium-136	U	-2.08	+/-11.7	21.6		pCi/L					
Cesium-137	U	4.29	+/-3.74	7.70	10.0	pCi/L					
Chromium-51	U	46.6	+/-49.6	92.5		pCi/L					
Cobalt-56	U	-0.121	+/-5.19	8.09		pCi/L					
Cobalt-57	U	2.84	+/-3.13	5.63		pCi/L					
Cobalt-58	U	1.69	+/-4.41	8.37		pCi/L					
Cobalt-60	U	-0.0279	+/-4.18	7.92		pCi/L					
Europium-152	U	-1.96	+/-11.9	20.7		pCi/L					
Europium-154	U	0.975	+/-10.8	21.0		pCi/L					
Europium-155	U	7.58	+/-13.6	24.0		pCi/L					
Iridium-192	U	-3.46	+/-4.51	7.54		pCi/L					
Iron-59	U	0.283	+/-9.69	18.3		pCi/L					
Lead-210	U	48.0	+/-832	1130		pCi/L					
Lead-212	U	-5.27	+/-9.08	14.2		pCi/L					
Lead-214	U	9.47	+/-13.9	19.4		pCi/L					
Manganese-54	U	3.26	+/-4.56	8.41		pCi/L					
Mercury-203	U	-0.892	+/-6.05	9.32		pCi/L					
Neodymium-147	U	-72.8	+/-71.0	111		pCi/L					
Neptunium-239	U	-0.992	+/-32.6	55.9		pCi/L					
Niobium-94	U	-2.14	+/-3.84	6.58		pCi/L					
Niobium-95	U	-0.307	+/-4.51	8.13		pCi/L					
Potassium-40	U	-28	+/-61.2	99.0		pCi/L					
Promethium-144	U	2.76	+/-4.50	8.50		pCi/L					

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 20 Project: WNUC00124  
Sample ID: 327663011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.492	+/-5.03	8.88	pCi/L
Radium-228	U	2.69	+/-22.2	30.7	pCi/L
Ruthenium-106	U	-5.47	+/-36.8	66.4	pCi/L
Silver-110m	U	-2.05	+/-3.98	6.90	pCi/L
Sodium-22	U	0.486	+/-3.83	7.48	pCi/L
Thallium-208	U	-3.78	+/-5.29	8.44	pCi/L
Thorium-230	U	-966	+/-1520	2420	pCi/L
Thorium-234	U	-37.6	+/-225	349	pCi/L
Tin-113	U	0.188	+/-5.17	9.14	pCi/L
Uranium-235	U	3.73	+/-31.6	43.5	pCi/L
Uranium-238	U	-37.6	+/-225	349	pCi/L
Yttrium-88	U	0.00769	+/-3.85	7.88	pCi/L
Zinc-65	U	0.115	+/-8.22	15.6	pCi/L
Zirconium-95	U	0.0704	+/-7.88	14.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.153	+/-1.35	3.10	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta	U	0.586	+/-1.58	2.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	2.67	+/-107	187	300	pCi/L	MYM1	07/02/13	2035	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	327663012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUN-13 09:55		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-27.9	+/-21.5	31.7		pCi/L		MXR1	06/27/13	1315	1308459	1
Americium-241	U	-6.56	+/-29.2	44.4		pCi/L						
Antimony-124	U	-9.82	+/-11.7	19.4		pCi/L						
Antimony-125	U	2.27	+/-10.0	18.7		pCi/L						
Barium-133	U	-1.09	+/-5.28	9.00		pCi/L						
Barium-140	U	4.29	+/-12.1	24.5		pCi/L						
Beryllium-7	U	-6.14	+/-37.7	67.9		pCi/L						
Bismuth-212	U	14.4	+/-70.0	109		pCi/L						
Bismuth-214	U	4.03	+/-10.1	16.4		pCi/L						
Cerium-139	U	-1.52	+/-3.45	6.01		pCi/L						
Cerium-141	U	0.779	+/-7.84	13.7		pCi/L						
Cerium-144	U	-9.23	+/-23.6	41.6		pCi/L						
Cesium-134	U	0.681	+/-4.00	7.69		pCi/L						
Cesium-136	U	2.88	+/-11.4	22.2		pCi/L						
Cesium-137	U	-0.20	+/-3.80	6.87	10.0	pCi/L						
Chromium-51	U	-18	+/-44.4	75.2		pCi/L						
Cobalt-56	U	7.99	+/-5.96	9.51		pCi/L						
Cobalt-57	U	-2.39	+/-3.17	5.51		pCi/L						
Cobalt-58	U	-1.6	+/-4.15	7.50		pCi/L						
Cobalt-60	U	-2.66	+/-5.34	7.52		pCi/L						
Europium-152	U	-2.2	+/-11.8	20.3		pCi/L						
Europium-154	U	5.03	+/-11.2	22.6		pCi/L						
Europium-155	U	1.57	+/-13.3	22.6		pCi/L						
Iridium-192	U	-0.269	+/-3.83	6.69		pCi/L						
Iron-59	U	-0.13	+/-9.64	17.9		pCi/L						
Lead-210	U	215	+/-1030	1650		pCi/L						
Lead-212	U	-0.291	+/-9.72	16.3		pCi/L						
Lead-214	U	-7.07	+/-11.0	16.1		pCi/L						
Manganese-54	U	-1.16	+/-3.67	6.67		pCi/L						
Mercury-203	U	-1.67	+/-4.72	8.07		pCi/L						
Neodymium-147	U	-43.8	+/-84.5	134		pCi/L						
Neptunium-239	U	-3.66	+/-32.4	58.2		pCi/L						
Niobium-94	U	3.51	+/-3.96	7.65		pCi/L						
Niobium-95	U	1.17	+/-3.88	7.32		pCi/L						
Potassium-40	U	5.71	+/-72.7	79.6		pCi/L						
Promethium-144	U	-0.217	+/-4.30	7.62		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 22

Sample ID: 327663012

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.17	+/-4.67	8.72	pCi/L
Radium-228	U	-27.9	+/-21.5	31.7	pCi/L
Ruthenium-106	U	-12.6	+/-38.8	67.8	pCi/L
Silver-110m	U	-0.328	+/-3.90	6.97	pCi/L
Sodium-22	U	1.64	+/-3.95	7.90	pCi/L
Thallium-208	U	0.324	+/-6.12	7.22	pCi/L
Thorium-230	U	830	+/-1790	2850	pCi/L
Thorium-234	U	252	+/-337	366	pCi/L
Tin-113	U	0.722	+/-5.02	9.30	pCi/L
Uranium-235	U	3.72	+/-30.6	44.6	pCi/L
Uranium-238	U	252	+/-337	366	pCi/L
Yttrium-88	U	1.58	+/-4.35	9.17	pCi/L
Zinc-65	U	-0.884	+/-8.93	14.9	pCi/L
Zirconium-95	U	5.23	+/-7.67	14.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	9.88	+/-4.30	3.82	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta	26.1	+/-4.42	3.21	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	61.1	+/-110	187	300	pCi/L	MYM1	07/02/13	2052	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 327663013  
Matrix: Ground Water  
Collect Date: 11-JUN-13 11:22  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.32	+/-16.8	27.7		pCi/L		MXR1	06/27/13	1315 1308459	1
Americium-241	U	-27.6	+/-16.7	27.5		pCi/L					
Antimony-124	U	-0.603	+/-8.88	17.2		pCi/L					
Antimony-125	U	-5.78	+/-8.83	15.1		pCi/L					
Barium-133	U	-1.72	+/-4.40	7.73		pCi/L					
Barium-140	U	3.00	+/-9.30	18.9		pCi/L					
Beryllium-7	U	-2.11	+/-33.4	59.7		pCi/L					
Bismuth-212	U	-52.4	+/-62.0	90.5		pCi/L					
Bismuth-214	U	0.849	+/-11.8	16.1		pCi/L					
Cerium-139	U	1.10	+/-3.24	5.72		pCi/L					
Cerium-141	U	6.06	+/-6.97	11.9		pCi/L					
Cerium-144	U	8.04	+/-23.0	39.4		pCi/L					
Cesium-134	U	0.107	+/-3.78	6.61		pCi/L					
Cesium-136	U	6.64	+/-10.4	20.7		pCi/L					
Cesium-137	U	2.20	+/-6.66	6.97	10.0	pCi/L					
Chromium-51	U	10.7	+/-39.6	72.8		pCi/L					
Cobalt-56	U	-0.053	+/-3.82	7.10		pCi/L					
Cobalt-57	U	1.50	+/-2.85	5.10		pCi/L					
Cobalt-58	U	0.259	+/-4.25	6.91		pCi/L					
Cobalt-60	U	0.788	+/-3.40	6.62		pCi/L					
Europium-152	U	1.05	+/-10.6	19.2		pCi/L					
Europium-154	U	-7.0	+/-9.62	16.1		pCi/L					
Europium-155	U	-3.24	+/-11.3	19.5		pCi/L					
Iridium-192	U	-0.00052	+/-3.73	6.73		pCi/L					
Iron-59	U	2.74	+/-8.05	15.6		pCi/L					
Lead-210	U	225	+/-580	678		pCi/L					
Lead-212	U	-7.46	+/-8.14	12.8		pCi/L					
Lead-214	U	-0.813	+/-8.97	14.8		pCi/L					
Manganese-54	U	2.27	+/-3.47	6.84		pCi/L					
Mercury-203	U	2.70	+/-4.01	7.51		pCi/L					
Neodymium-147	U	-13.2	+/-54.6	96.7		pCi/L					
Neptunium-239	U	-8.32	+/-28.7	49.5		pCi/L					
Niobium-94	U	-1.99	+/-3.28	5.50		pCi/L					
Niobium-95	U	6.57	+/-3.93	8.11		pCi/L					
Potassium-40	U	-46.3	+/-44.9	71.1		pCi/L					
Promethium-144	U	2.01	+/-3.60	6.70		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 327663013

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.90	+/-4.23	8.01	pCi/L
Radium-228	U	2.32	+/-16.8	27.7	pCi/L
Ruthenium-106	U	0.0545	+/-36.9	63.7	pCi/L
Silver-110m	U	-0.765	+/-4.10	6.16	pCi/L
Sodium-22	U	-2.47	+/-3.40	5.69	pCi/L
Thallium-208	U	-1.98	+/-4.28	6.87	pCi/L
Thorium-230	U	-913	+/-1250	2020	pCi/L
Thorium-234	U	-61.8	+/-173	282	pCi/L
Tin-113	U	0.0405	+/-4.71	8.04	pCi/L
Uranium-235	U	-0.742	+/-26.0	37.1	pCi/L
Uranium-238	U	-61.8	+/-173	282	pCi/L
Yttrium-88	U	0.469	+/-3.60	7.32	pCi/L
Zinc-65	U	-2.8	+/-6.71	11.9	pCi/L
Zirconium-95	U	3.01	+/-6.44	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.27	+/-1.49	2.37	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta		6.40	+/-3.13	4.73	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	25.3	+/-107	185	300	pCi/L	MYM1	07/02/13	2108	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 24	Project:	WNUC00124
Sample ID:	327663014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 09:20		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.2	+/-14.4	25.4		pCi/L		MXR1	06/27/13	1315 1308459	1
Americium-241	U	-1.69	+/-16.1	26.3		pCi/L					
Antimony-124	U	3.59	+/-7.49	16.2		pCi/L					
Antimony-125	U	-0.186	+/-8.13	14.2		pCi/L					
Barium-133	U	-2.99	+/-4.76	7.12		pCi/L					
Barium-140	U	-6.17	+/-11.9	18.9		pCi/L					
Beryllium-7	U	-19.4	+/-29.8	50.6		pCi/L					
Bismuth-212	U	20.8	+/-47.6	92.0		pCi/L					
Bismuth-214	U	-0.945	+/-9.04	14.6		pCi/L					
Cerium-139	U	3.89	+/-3.01	5.18		pCi/L					
Cerium-141	U	2.77	+/-9.45	10.2		pCi/L					
Cerium-144	U	4.50	+/-19.0	33.9		pCi/L					
Cesium-134	U	-0.448	+/-3.30	6.10		pCi/L					
Cesium-136	U	0.336	+/-9.78	18.2		pCi/L					
Cesium-137	U	0.172	+/-4.64	7.13	10.0	pCi/L					
Chromium-51	U	12.8	+/-36.7	68.3		pCi/L					
Cobalt-56	U	-1.59	+/-3.23	5.71		pCi/L					
Cobalt-57	U	0.230	+/-2.40	4.28		pCi/L					
Cobalt-58	U	-2.37	+/-3.52	6.08		pCi/L					
Cobalt-60	U	-0.472	+/-3.81	7.17		pCi/L					
Europium-152	U	-2.06	+/-9.32	15.5		pCi/L					
Europium-154	U	2.07	+/-8.27	16.9		pCi/L					
Europium-155	U	-2.6	+/-10.2	17.9		pCi/L					
Iridium-192	U	-0.213	+/-3.48	6.30		pCi/L					
Iron-59	U	-4.06	+/-7.73	13.3		pCi/L					
Lead-210	U	77.3	+/-574	644		pCi/L					
Lead-212	U	0.115	+/-9.82	9.97		pCi/L					
Lead-214	U	2.24	+/-13.6	12.8		pCi/L					
Manganese-54	U	-0.286	+/-3.05	5.64		pCi/L					
Mercury-203	U	-8.2	+/-4.75	6.58		pCi/L					
Neodymium-147	U	-31.8	+/-51.3	86.6		pCi/L					
Neptunium-239	U	-8.19	+/-26.9	46.8		pCi/L					
Niobium-94	U	2.00	+/-3.19	6.00		pCi/L					
Niobium-95	U	-3.56	+/-5.22	7.07		pCi/L					
Potassium-40	U	55.2	+/-57.7	63.7		pCi/L					
Promethium-144	U	2.71	+/-3.05	6.15		pCi/L					

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 24 Project: WNUC00124  
Sample ID: 327663014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.915	+/-3.99	7.33	pCi/L
Radium-228	U	-3.2	+/-14.4	25.4	pCi/L
Ruthenium-106	U	27.6	+/-28.7	56.3	pCi/L
Silver-110m	U	-0.734	+/-3.61	6.24	pCi/L
Sodium-22	U	0.674	+/-2.91	5.94	pCi/L
Thallium-208	U	-2.2	+/-4.72	7.67	pCi/L
Thorium-230	U	910	+/-1400	1840	pCi/L
Thorium-234	U	84.8	+/-197	222	pCi/L
Tin-113	U	0.859	+/-3.99	7.38	pCi/L
Uranium-235	U	8.63	+/-29.5	33.3	pCi/L
Uranium-238	U	84.8	+/-197	222	pCi/L
Yttrium-88	U	0.435	+/-4.04	7.96	pCi/L
Zinc-65	U	-7.91	+/-7.19	11.2	pCi/L
Zirconium-95	U	1.90	+/-6.02	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.408	+/-1.63	3.26	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta		8.05	+/-2.79	3.30	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	58.4	+/-109	186	300	pCi/L	MYM1	07/02/13	2124	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 26	Project:	WNUC00124
Sample ID:	327663015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	12-JUN-13 10:33		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	1.12	+/-19.1	24.8		pCi/L		MXR1	06/27/13	1324	1308459	1
Americium-241	U	-0.00153	+/-20.7	29.3		pCi/L						
Antimony-124	U	0.821	+/-7.96	15.8		pCi/L						
Antimony-125	U	-7.67	+/-8.57	14.2		pCi/L						
Barium-133	U	2.16	+/-4.44	7.28		pCi/L						
Barium-140	U	4.22	+/-8.69	15.6		pCi/L						
Beryllium-7	U	-7.17	+/-29.5	51.4		pCi/L						
Bismuth-212	U	-8.09	+/-42.2	77.3		pCi/L						
Bismuth-214	U	1.09	+/-9.75	10.7		pCi/L						
Cerium-139	U	-4.41	+/-3.55	4.83		pCi/L						
Cerium-141	U	0.0474	+/-6.34	10.7		pCi/L						
Cerium-144	U	8.71	+/-20.4	35.4		pCi/L						
Cesium-134	U	-0.391	+/-3.14	5.82		pCi/L						
Cesium-136	U	-0.595	+/-10.3	16.4		pCi/L						
Cesium-137	U	0.0184	+/-3.36	5.94	10.0	pCi/L						
Chromium-51	U	13.0	+/-36.3	66.3		pCi/L						
Cobalt-56	U	-0.417	+/-3.26	6.01		pCi/L						
Cobalt-57	U	1.36	+/-2.54	4.45		pCi/L						
Cobalt-58	U	1.82	+/-3.09	6.12		pCi/L						
Cobalt-60	UI	0.00	+/-6.51	6.70		pCi/L						
Europium-152	U	-0.531	+/-9.52	16.4		pCi/L						
Europium-154	UI	0.00	+/-12.0	21.9		pCi/L						
Europium-155	U	1.80	+/-10.9	18.7		pCi/L						
Iridium-192	U	-0.358	+/-3.40	6.03		pCi/L						
Iron-59	U	2.82	+/-9.05	15.1		pCi/L						
Lead-210	U	547	+/-869	685		pCi/L						
Lead-212	U	-7.9	+/-6.99	11.0		pCi/L						
Lead-214	U	9.78	+/-10.2	13.7		pCi/L						
Manganese-54	U	1.33	+/-2.89	5.63		pCi/L						
Mercury-203	U	3.39	+/-3.74	6.69		pCi/L						
Neodymium-147	U	-17.7	+/-52.2	89.9		pCi/L						
Neptunium-239	U	-3.93	+/-27.2	46.0		pCi/L						
Niobium-94	U	1.07	+/-3.12	5.65		pCi/L						
Niobium-95	U	1.78	+/-3.26	6.37		pCi/L						
Potassium-40	U	13.4	+/-70.4	63.9		pCi/L						
Promethium-144	U	0.206	+/-3.12	5.52		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 26	Project:	WNUC00124
Sample ID:	327663015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	5.67	+/-4.48	7.35	pCi/L
Radium-228	U	1.12	+/-19.1	24.8	pCi/L
Ruthenium-106	U	7.61	+/-26.3	48.2	pCi/L
Silver-110m	U	-0.788	+/-3.10	5.35	pCi/L
Sodium-22	UI	0.00	+/-4.24	5.88	pCi/L
Thallium-208	U	2.58	+/-5.44	5.15	pCi/L
Thorium-230	U	789	+/-1320	2100	pCi/L
Thorium-234	U	89.6	+/-256	304	pCi/L
Tin-113	U	-0.644	+/-4.38	7.72	pCi/L
Uranium-235	U	3.44	+/-24.6	36.2	pCi/L
Uranium-238	U	89.6	+/-256	304	pCi/L
Yttrium-88	U	1.61	+/-3.71	7.49	pCi/L
Zinc-65	U	-3.47	+/-6.57	11.4	pCi/L
Zirconium-95	U	3.74	+/-5.84	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.573	+/-1.49	3.04	5.00	pCi/L	DYT1	06/28/13	1511	1310080	2
Beta		9.21	+/-3.60	4.95	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	22.9	+/-108	187	300	pCi/L	MYM1	07/02/13	2141	1308613	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 27	Project:	WNUC00124
Sample ID:	327663016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 14:25		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	12.3	+/-18.5	20.9		pCi/L		MXR1	06/27/13	1325	1308459	1
Americium-241	U	-8.02	+/-14.5	21.2		pCi/L						
Antimony-124	U	-1.34	+/-7.57	14.3		pCi/L						
Antimony-125	U	7.53	+/-8.15	15.4		pCi/L						
Barium-133	U	-2.4	+/-4.45	6.97		pCi/L						
Barium-140	U	9.25	+/-10.0	19.5		pCi/L						
Beryllium-7	U	-3.14	+/-30.9	53.6		pCi/L						
Bismuth-212	U	-24.4	+/-43.6	75.5		pCi/L						
Bismuth-214	U	12.6	+/-6.76	13.9		pCi/L						
Cerium-139	U	1.85	+/-2.78	5.14		pCi/L						
Cerium-141	U	0.493	+/-6.16	9.83		pCi/L						
Cerium-144	U	-8.25	+/-17.5	30.8		pCi/L						
Cesium-134	U	-1.24	+/-4.24	6.41		pCi/L						
Cesium-136	U	-2.14	+/-8.44	15.0		pCi/L						
Cesium-137	U	-0.122	+/-3.17	5.82	10.0	pCi/L						
Chromium-51	U	3.64	+/-34.1	60.7		pCi/L						
Cobalt-56	U	0.699	+/-3.61	6.71		pCi/L						
Cobalt-57	U	-0.15	+/-2.29	4.13		pCi/L						
Cobalt-58	U	0.326	+/-3.62	5.87		pCi/L						
Cobalt-60	U	2.92	+/-3.15	6.77		pCi/L						
Europium-152	U	-3.78	+/-9.14	15.6		pCi/L						
Europium-154	U	3.32	+/-8.91	17.9		pCi/L						
Europium-155	U	0.322	+/-9.82	16.6		pCi/L						
Iridium-192	U	0.478	+/-3.12	5.59		pCi/L						
Iron-59	U	2.74	+/-6.58	12.9		pCi/L						
Lead-210	U	-238	+/-347	503		pCi/L						
Lead-212	U	4.20	+/-10.7	10.5		pCi/L						
Lead-214	U	2.40	+/-7.63	12.9		pCi/L						
Manganese-54	U	1.52	+/-3.25	6.20		pCi/L						
Mercury-203	U	0.887	+/-3.77	6.74		pCi/L						
Neodymium-147	U	-33.7	+/-50.6	88.3		pCi/L						
Neptunium-239	U	3.07	+/-23.8	43.3		pCi/L						
Niobium-94	U	1.46	+/-2.84	5.45		pCi/L						
Niobium-95	U	0.610	+/-3.41	6.37		pCi/L						
Potassium-40	U	-32.1	+/-46.0	76.6		pCi/L						
Promethium-144	U	-1.3	+/-2.81	4.93		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 27

Sample ID: 327663016

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.06	+/-3.89	6.65	pCi/L
Radium-228	U	12.3	+/-18.5	20.9	pCi/L
Ruthenium-106	U	0.226	+/-26.0	48.1	pCi/L
Silver-110m	U	-1.15	+/-3.06	5.42	pCi/L
Sodium-22	U	1.33	+/-3.17	6.40	pCi/L
Thallium-208	U	0.845	+/-4.04	6.81	pCi/L
Thorium-230	U	590	+/-1040	1660	pCi/L
Thorium-234	U	131	+/-218	218	pCi/L
Tin-113	U	-0.515	+/-4.30	7.48	pCi/L
Uranium-235	U	23.9	+/-19.7	31.7	pCi/L
Uranium-238	U	131	+/-218	218	pCi/L
Yttrium-88	U	-1.17	+/-3.83	6.97	pCi/L
Zinc-65	U	0.163	+/-7.20	13.1	pCi/L
Zirconium-95	U	2.45	+/-5.94	11.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.81	+/-1.43	1.59	5.00	pCi/L	DYT1	06/28/13	1500	1310081	2
Beta	10.6	+/-2.18	3.10	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-53.2	+/-117	208	300	pCi/L	MYM1	07/02/13	2302	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	327663017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUN-13 11:30		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	11.4	+/-21.5	30.0		pCi/L		MXR1	06/27/13	1325	1308459	1
Americium-241	U	-26.6	+/-32.4	47.3		pCi/L						
Antimony-124	U	3.39	+/-9.55	19.7		pCi/L						
Antimony-125	U	-0.681	+/-9.46	16.7		pCi/L						
Barium-133	U	0.390	+/-4.75	7.53		pCi/L						
Barium-140	U	-6.0	+/-7.41	12.5		pCi/L						
Beryllium-7	U	7.39	+/-33.1	60.1		pCi/L						
Bismuth-212	U	-9.93	+/-49.5	90.1		pCi/L						
Bismuth-214	U	9.82	+/-9.04	15.9		pCi/L						
Cerium-139	U	-2.62	+/-3.48	5.60		pCi/L						
Cerium-141	U	3.29	+/-11.1	11.4		pCi/L						
Cerium-144	U	-0.0716	+/-21.6	36.8		pCi/L						
Cesium-134	U	1.45	+/-3.39	6.55		pCi/L						
Cesium-136	U	5.55	+/-11.0	21.7		pCi/L						
Cesium-137	U	-0.0769	+/-3.32	6.21	10.0	pCi/L						
Chromium-51	U	-19.8	+/-38.8	67.1		pCi/L						
Cobalt-56	U	0.915	+/-3.47	6.71		pCi/L						
Cobalt-57	U	-0.0563	+/-2.95	5.03		pCi/L						
Cobalt-58	U	-0.282	+/-4.30	6.55		pCi/L						
Cobalt-60	U	-1.92	+/-3.55	6.05		pCi/L						
Europium-152	U	4.83	+/-10.5	18.1		pCi/L						
Europium-154	U	-4.73	+/-9.71	16.8		pCi/L						
Europium-155	U	13.8	+/-15.6	21.8		pCi/L						
Iridium-192	U	2.77	+/-3.42	6.49		pCi/L						
Iron-59	U	-3.28	+/-8.34	14.7		pCi/L						
Lead-210	U	-247	+/-1400	2120		pCi/L						
Lead-212	U	-2.54	+/-7.81	11.9		pCi/L						
Lead-214	U	8.99	+/-14.8	14.9		pCi/L						
Manganese-54	U	-1.66	+/-3.48	6.13		pCi/L						
Mercury-203	U	-0.751	+/-4.20	7.09		pCi/L						
Neodymium-147	U	-77.2	+/-65.3	102		pCi/L						
Neptunium-239	U	4.61	+/-29.9	51.7		pCi/L						
Niobium-94	U	0.687	+/-3.28	6.19		pCi/L						
Niobium-95	U	0.142	+/-3.72	6.97		pCi/L						
Potassium-40	U	61.8	+/-59.3	78.8		pCi/L						
Promethium-144	U	2.07	+/-3.11	6.15		pCi/L						

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 28

Sample ID: 327663017

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.566	+/-3.98	7.22	pCi/L
Radium-228	U	11.4	+/-21.5	30.0	pCi/L
Ruthenium-106	U	18.3	+/-32.3	60.2	pCi/L
Silver-110m	U	-0.773	+/-3.04	5.58	pCi/L
Sodium-22	U	-1.67	+/-3.43	5.93	pCi/L
Thallium-208	U	0.772	+/-5.17	6.28	pCi/L
Thorium-230	U	2680	+/-1880	2950	pCi/L
Thorium-234	U	75.4	+/-302	448	pCi/L
Tin-113	U	-0.539	+/-4.69	8.29	pCi/L
Uranium-235	U	10.1	+/-34.1	40.1	pCi/L
Uranium-238	U	75.4	+/-302	448	pCi/L
Yttrium-88	U	1.29	+/-4.91	9.79	pCi/L
Zinc-65	U	-7.35	+/-8.38	13.7	pCi/L
Zirconium-95	U	-4.28	+/-6.38	11.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	11.4	+/-2.49	1.84	5.00	pCi/L	DYT1	06/28/13	1500	1310081	2
Beta	22.6	+/-2.39	2.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-93.3	+/-113	204	300	pCi/L	MYM1	07/02/13	2319	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 29  
Sample ID: 327663018  
Matrix: Ground Water  
Collect Date: 10-JUN-13 09:20  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.8	+/-21.7	23.7		pCi/L		MXR1	06/27/13	1325 1308459	1
Americium-241	U	4.36	+/-24.0	39.6		pCi/L					
Antimony-124	U	-1.73	+/-10.8	20.3		pCi/L					
Antimony-125	U	-4.41	+/-10.8	18.4		pCi/L					
Barium-133	U	2.27	+/-5.14	8.34		pCi/L					
Barium-140	U	-7.33	+/-12.5	17.9		pCi/L					
Beryllium-7	U	23.1	+/-38.3	70.1		pCi/L					
Bismuth-212	U	2.49	+/-69.2	105		pCi/L					
Bismuth-214	U	2.08	+/-10.7	14.7		pCi/L					
Cerium-139	U	2.41	+/-3.42	6.06		pCi/L					
Cerium-141	U	1.19	+/-8.11	12.6		pCi/L					
Cerium-144	U	-16.4	+/-22.3	37.3		pCi/L					
Cesium-134	U	1.06	+/-4.90	8.93		pCi/L					
Cesium-136	U	7.02	+/-11.0	22.3		pCi/L					
Cesium-137	UI	0.00	+/-8.52	7.45	10.0	pCi/L					
Chromium-51	U	-0.287	+/-44.5	79.2		pCi/L					
Cobalt-56	U	1.96	+/-4.56	8.53		pCi/L					
Cobalt-57	U	-0.278	+/-2.87	4.99		pCi/L					
Cobalt-58	U	-1.8	+/-4.37	7.54		pCi/L					
Cobalt-60	U	-0.0441	+/-5.28	8.98		pCi/L					
Europium-152	U	-3.32	+/-12.1	17.1		pCi/L					
Europium-154	U	6.09	+/-12.0	23.7		pCi/L					
Europium-155	U	0.874	+/-11.9	21.0		pCi/L					
Iridium-192	U	-2.03	+/-4.07	7.03		pCi/L					
Iron-59	U	-8.04	+/-8.93	14.8		pCi/L					
Lead-210	U	-218	+/-795	1160		pCi/L					
Lead-212	U	5.99	+/-9.18	12.5		pCi/L					
Lead-214	U	10.1	+/-11.5	16.6		pCi/L					
Manganese-54	U	1.48	+/-3.97	7.40		pCi/L					
Mercury-203	U	-1.93	+/-4.01	7.01		pCi/L					
Neodymium-147	U	-13.5	+/-60.8	111		pCi/L					
Neptunium-239	U	13.5	+/-30.5	54.4		pCi/L					
Niobium-94	U	-0.918	+/-3.84	6.78		pCi/L					
Niobium-95	U	4.12	+/-4.45	8.71		pCi/L					
Potassium-40	U	12.7	+/-74.5	65.8		pCi/L					
Promethium-144	U	-1.04	+/-4.62	7.01		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	327663018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.49	+/-5.12	8.73	pCi/L
Radium-228	U	19.8	+/-21.7	23.7	pCi/L
Ruthenium-106	U	-22.7	+/-36.8	63.5	pCi/L
Silver-110m	U	-1.63	+/-4.47	6.71	pCi/L
Sodium-22	U	1.22	+/-4.27	8.23	pCi/L
Thallium-208	U	1.64	+/-5.02	8.01	pCi/L
Thorium-230	U	550	+/-1940	2480	pCi/L
Thorium-234	U	65.7	+/-255	314	pCi/L
Tin-113	U	0.0777	+/-5.08	8.98	pCi/L
Uranium-235	U	6.33	+/-31.8	36.9	pCi/L
Uranium-238	U	65.7	+/-255	314	pCi/L
Yttrium-88	U	-0.896	+/-4.44	8.34	pCi/L
Zinc-65	U	6.11	+/-9.45	16.8	pCi/L
Zirconium-95	U	3.46	+/-8.45	15.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.77	+/-3.62	4.96	5.00	pCi/L	DYT1	06/28/13	1500	1310081	2
Beta	65.3	+/-5.33	4.96	5.00	pCi/L					
Alpha	6.42	+/-3.13	3.69	5.00	pCi/L	DYT1	06/30/13	1609	1310081	3
Beta	67.6	+/-4.98	4.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	15.6	+/-118	205	300	pCi/L	MYM1	07/02/13	2335	1308615	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	327663018	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 327663019  
Matrix: Ground Water  
Collect Date: 10-JUN-13 09:39  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	12.0	+/-24.4	32.7		pCi/L		MXR1	06/27/13	1404	1308459	1
Americium-241	U	-15.7	+/-22.1	33.5		pCi/L						
Antimony-124	U	7.11	+/-9.17	20.1		pCi/L						
Antimony-125	U	-4.79	+/-12.5	18.8		pCi/L						
Barium-133	U	-2.33	+/-5.38	9.43		pCi/L						
Barium-140	U	-0.52	+/-11.2	21.4		pCi/L						
Beryllium-7	U	-20.1	+/-41.3	71.2		pCi/L						
Bismuth-212	U	-37.4	+/-76.2	109		pCi/L						
Bismuth-214	U	-14.4	+/-11.8	15.0		pCi/L						
Cerium-139	U	0.649	+/-6.46	6.43		pCi/L						
Cerium-141	U	5.66	+/-8.51	14.2		pCi/L						
Cerium-144	U	2.68	+/-27.7	42.7		pCi/L						
Cesium-134	U	6.18	+/-4.57	9.29		pCi/L						
Cesium-136	U	10.5	+/-11.1	22.8		pCi/L						
Cesium-137	U	2.42	+/-4.08	7.64	10.0	pCi/L						
Chromium-51	U	-53.1	+/-46.1	77.8		pCi/L						
Cobalt-56	U	-3.38	+/-4.71	8.13		pCi/L						
Cobalt-57	U	3.24	+/-3.17	5.64		pCi/L						
Cobalt-58	U	-1.23	+/-5.10	9.18		pCi/L						
Cobalt-60	U	0.858	+/-3.52	6.85		pCi/L						
Europium-152	U	-4.25	+/-12.0	21.2		pCi/L						
Europium-154	U	-3.19	+/-11.5	20.5		pCi/L						
Europium-155	U	0.846	+/-13.1	23.1		pCi/L						
Iridium-192	U	3.80	+/-4.24	8.01		pCi/L						
Iron-59	U	-4.69	+/-8.35	14.5		pCi/L						
Lead-210	U	-2.21	+/-569	906		pCi/L						
Lead-212	U	-12.1	+/-9.93	13.6		pCi/L						
Lead-214	U	-2.91	+/-11.9	18.1		pCi/L						
Manganese-54	U	2.28	+/-4.24	8.12		pCi/L						
Mercury-203	U	-2.55	+/-5.89	9.14		pCi/L						
Neodymium-147	U	-33.7	+/-79.1	137		pCi/L						
Neptunium-239	U	23.4	+/-39.8	57.1		pCi/L						
Niobium-94	U	-0.85	+/-4.30	6.72		pCi/L						
Niobium-95	U	-0.31	+/-4.98	8.72		pCi/L						
Potassium-40	U	-50.7	+/-48.9	85.5		pCi/L						
Promethium-144	U	2.45	+/-4.20	7.54		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 327663019

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.0948	+/-5.04	9.04	pCi/L
Radium-228	U	12.0	+/-24.4	32.7	pCi/L
Ruthenium-106	U	-12.6	+/-36.6	63.3	pCi/L
Silver-110m	U	-1.65	+/-3.98	6.81	pCi/L
Sodium-22	U	-1.24	+/-4.05	7.20	pCi/L
Thallium-208	U	1.04	+/-6.84	7.76	pCi/L
Thorium-230	U	1310	+/-1500	2470	pCi/L
Thorium-234	U	42.3	+/-235	311	pCi/L
Tin-113	U	2.62	+/-5.63	10.4	pCi/L
Uranium-235	U	-23.7	+/-30.0	41.6	pCi/L
Uranium-238	U	42.3	+/-235	311	pCi/L
Yttrium-88	U	0.898	+/-4.34	8.72	pCi/L
Zinc-65	U	-3.21	+/-7.47	13.2	pCi/L
Zirconium-95	U	-1.25	+/-8.40	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	13.3	+/-5.20	4.89	5.00	pCi/L	DYT1	06/28/13	1615	1310081	2
Beta	45.7	+/-5.05	4.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	56.8	+/-120	204	300	pCi/L	MYM1	07/02/13	2351	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	327663020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 08:52		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	3.51	+/-12.2	23.0		pCi/L		MXR1	06/27/13	1811	1308459	1
Americium-241	U	-15.1	+/-11.9	18.9		pCi/L						
Antimony-124	U	-4.37	+/-10.4	15.2		pCi/L						
Antimony-125	U	-0.767	+/-8.24	14.4		pCi/L						
Barium-133	U	3.74	+/-2.94	7.16		pCi/L						
Barium-140	U	1.95	+/-8.18	16.4		pCi/L						
Beryllium-7	U	9.19	+/-27.5	52.3		pCi/L						
Bismuth-212	U	-10.7	+/-39.6	71.1		pCi/L						
Bismuth-214	U	3.68	+/-6.75	12.8		pCi/L						
Cerium-139	U	0.476	+/-2.63	4.75		pCi/L						
Cerium-141	U	2.04	+/-5.89	10.4		pCi/L						
Cerium-144	U	-9.11	+/-16.4	28.7		pCi/L						
Cesium-134	U	0.947	+/-3.21	6.10		pCi/L						
Cesium-136	U	-0.788	+/-8.85	16.1		pCi/L						
Cesium-137	U	2.31	+/-3.17	6.22	10.0	pCi/L						
Chromium-51	U	-12.2	+/-33.4	57.3		pCi/L						
Cobalt-56	U	0.488	+/-3.37	6.28		pCi/L						
Cobalt-57	U	0.562	+/-2.19	4.00		pCi/L						
Cobalt-58	U	0.544	+/-3.37	5.57		pCi/L						
Cobalt-60	U	1.43	+/-3.38	6.78		pCi/L						
Europium-152	U	1.94	+/-8.92	15.9		pCi/L						
Europium-154	U	5.88	+/-8.90	18.5		pCi/L						
Europium-155	U	5.36	+/-8.73	15.3		pCi/L						
Iridium-192	U	0.412	+/-3.23	5.75		pCi/L						
Iron-59	U	3.90	+/-6.46	13.0		pCi/L						
Lead-210	U	224	+/-390	383		pCi/L						
Lead-212	U	7.61	+/-7.45	11.3		pCi/L						
Lead-214	U	-3.78	+/-8.70	12.1		pCi/L						
Manganese-54	U	1.70	+/-3.48	6.59		pCi/L						
Mercury-203	U	0.224	+/-3.36	5.98		pCi/L						
Neodymium-147	U	26.0	+/-47.9	93.5		pCi/L						
Neptunium-239	U	-22.4	+/-26.4	41.6		pCi/L						
Niobium-94	U	-0.949	+/-2.92	5.17		pCi/L						
Niobium-95	U	1.84	+/-3.45	6.64		pCi/L						
Potassium-40	U	18.3	+/-54.6	60.2		pCi/L						
Promethium-144	U	-4.07	+/-4.85	5.52		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 32 Project: WNUC00124  
Sample ID: 327663020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.48	+/-4.41	6.44	pCi/L
Radium-228	U	3.51	+/-12.2	23.0	pCi/L
Ruthenium-106	U	4.72	+/-27.5	51.4	pCi/L
Silver-110m	U	-0.673	+/-3.07	5.51	pCi/L
Sodium-22	U	2.57	+/-3.07	6.53	pCi/L
Thallium-208	U	-0.311	+/-3.79	6.12	pCi/L
Thorium-230	U	-605	+/-1080	1540	pCi/L
Thorium-234	U	-153	+/-139	217	pCi/L
Tin-113	U	3.18	+/-3.80	7.18	pCi/L
Uranium-235	U	7.97	+/-21.8	33.6	pCi/L
Uranium-238	U	-153	+/-139	217	pCi/L
Yttrium-88	U	0.145	+/-3.62	7.07	pCi/L
Zinc-65	U	-0.802	+/-7.11	12.7	pCi/L
Zirconium-95	U	0.938	+/-6.07	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.06	+/-2.53	4.00	5.00	pCi/L	DYT1	06/28/13	1457	1310081	2
Beta		200	+/-10.7	4.90	5.00	pCi/L					
Alpha	U	2.08	+/-1.63	2.51	5.00	pCi/L	DYT1	06/30/13	1609	1310081	3
Beta		213	+/-5.57	2.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	426	+/-134	205	300	pCi/L	MYM1	07/03/13	0008	1308615	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32  
Sample ID: 327663020

Project: WNUC00124  
Client ID: WNUC001

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 33	Project:	WNUC00124
Sample ID:	327663021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 09:42		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.46	+/-12.3	23.8		pCi/L		MXR1	06/27/13	1316 1308460	1
Americium-241	U	6.34	+/-11.9	20.9		pCi/L					
Antimony-124	U	-0.0839	+/-9.05	17.2		pCi/L					
Antimony-125	U	0.739	+/-7.94	14.1		pCi/L					
Barium-133	UI	0.00	+/-9.58	7.09		pCi/L					
Barium-140	U	-7.64	+/-9.18	11.7		pCi/L					
Beryllium-7	U	-16.4	+/-26.0	45.8		pCi/L					
Bismuth-212	U	10.6	+/-38.8	73.8		pCi/L					
Bismuth-214	U	6.88	+/-6.54	12.9		pCi/L					
Cerium-139	U	0.206	+/-2.63	4.72		pCi/L					
Cerium-141	U	6.30	+/-7.70	9.65		pCi/L					
Cerium-144	U	-3.06	+/-17.3	28.7		pCi/L					
Cesium-134	U	0.225	+/-2.85	5.37		pCi/L					
Cesium-136	U	1.32	+/-8.83	16.5		pCi/L					
Cesium-137	U	3.16	+/-3.12	6.27	10.0	pCi/L					
Chromium-51	U	32.5	+/-39.0	56.9		pCi/L					
Cobalt-56	U	-1.63	+/-3.61	6.27		pCi/L					
Cobalt-57	U	-1.28	+/-2.45	3.75		pCi/L					
Cobalt-58	U	0.463	+/-3.02	5.70		pCi/L					
Cobalt-60	U	1.63	+/-3.07	6.04		pCi/L					
Europium-152	U	0.441	+/-8.87	15.7		pCi/L					
Europium-154	U	3.08	+/-8.77	15.9		pCi/L					
Europium-155	U	3.70	+/-8.44	15.7		pCi/L					
Iridium-192	U	0.166	+/-3.58	5.55		pCi/L					
Iron-59	U	-4.18	+/-8.25	11.7		pCi/L					
Lead-210	U	-156	+/-285	433		pCi/L					
Lead-212	U	-0.565	+/-6.19	10.2		pCi/L					
Lead-214	U	4.24	+/-8.54	13.1		pCi/L					
Manganese-54	U	-0.513	+/-3.29	5.89		pCi/L					
Mercury-203	U	0.224	+/-3.39	6.02		pCi/L					
Neodymium-147	U	-30.1	+/-47.8	83.7		pCi/L					
Neptunium-239	U	-20	+/-27.9	39.4		pCi/L					
Niobium-94	U	2.87	+/-3.87	5.45		pCi/L					
Niobium-95	U	2.46	+/-3.42	6.71		pCi/L					
Potassium-40	U	-20.6	+/-43.0	76.0		pCi/L					
Promethium-144	U	-2.42	+/-4.92	5.95		pCi/L					

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## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 33 Project: WNUC00124  
Sample ID: 327663021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.20	+/-3.86	7.10	pCi/L
Radium-228	U	7.46	+/-12.3	23.8	pCi/L
Ruthenium-106	U	-20.2	+/-28.8	49.5	pCi/L
Silver-110m	U	-1.1	+/-2.96	5.25	pCi/L
Sodium-22	U	-0.163	+/-3.40	5.61	pCi/L
Thallium-208	U	2.20	+/-4.86	6.01	pCi/L
Thorium-230	U	42.8	+/-896	1560	pCi/L
Thorium-234	U	-229	+/-144	218	pCi/L
Tin-113	U	-0.142	+/-3.94	6.91	pCi/L
Uranium-235	U	19.6	+/-24.0	25.5	pCi/L
Uranium-238	U	-229	+/-144	218	pCi/L
Yttrium-88	U	1.94	+/-3.65	7.70	pCi/L
Zinc-65	U	-3.7	+/-7.14	12.1	pCi/L
Zirconium-95	U	-0.14	+/-5.03	9.38	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.832	+/-1.44	2.62	5.00	pCi/L	DYT1	06/28/13	1641	1310081	2
Beta		6.39	+/-3.15	4.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-30.8	+/-115	202	300	pCi/L	MYM1	07/03/13	0024	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	327663022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 13:30		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-8.35	+/-17.6	26.6		pCi/L		MXR1	06/28/13	0830	1308460	1
Americium-241	U	-1.57	+/-11.9	17.8		pCi/L						
Antimony-124	U	5.08	+/-8.00	16.9		pCi/L						
Antimony-125	U	-3.59	+/-8.79	14.7		pCi/L						
Barium-133	U	2.73	+/-4.37	7.08		pCi/L						
Barium-140	U	1.45	+/-8.57	16.8		pCi/L						
Beryllium-7	U	-1.62	+/-30.8	56.1		pCi/L						
Bismuth-212	U	9.76	+/-48.0	88.2		pCi/L						
Bismuth-214	U	7.16	+/-11.3	12.0		pCi/L						
Cerium-139	U	-0.35	+/-2.90	5.09		pCi/L						
Cerium-141	U	1.47	+/-6.33	11.0		pCi/L						
Cerium-144	U	6.25	+/-18.4	32.4		pCi/L						
Cesium-134	U	-1.53	+/-3.46	6.00		pCi/L						
Cesium-136	U	0.00916	+/-9.26	17.6		pCi/L						
Cesium-137	U	1.91	+/-3.61	6.80	10.0	pCi/L						
Chromium-51	U	11.0	+/-39.4	69.8		pCi/L						
Cobalt-56	U	2.66	+/-3.47	6.79		pCi/L						
Cobalt-57	U	0.0305	+/-2.39	4.27		pCi/L						
Cobalt-58	U	-2.42	+/-3.60	6.07		pCi/L						
Cobalt-60	U	-1.24	+/-5.00	7.69		pCi/L						
Europium-152	U	4.31	+/-9.12	16.4		pCi/L						
Europium-154	U	8.11	+/-12.9	17.4		pCi/L						
Europium-155	U	3.22	+/-9.00	16.5		pCi/L						
Iridium-192	U	-2.87	+/-4.07	6.31		pCi/L						
Iron-59	U	-3.57	+/-8.95	13.2		pCi/L						
Lead-210	U	53.9	+/-338	319		pCi/L						
Lead-212	U	1.09	+/-9.11	11.6		pCi/L						
Lead-214	U	2.47	+/-10.1	13.5		pCi/L						
Manganese-54	U	1.57	+/-3.51	6.56		pCi/L						
Mercury-203	U	0.226	+/-3.84	6.74		pCi/L						
Neodymium-147	U	-12.6	+/-58.7	103		pCi/L						
Neptunium-239	U	-15.2	+/-27.0	43.4		pCi/L						
Niobium-94	U	0.376	+/-3.27	5.94		pCi/L						
Niobium-95	U	-2.45	+/-3.56	6.01		pCi/L						
Potassium-40	U	22.1	+/-64.6	54.0		pCi/L						
Promethium-144	U	2.77	+/-3.30	6.35		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	327663022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.229	+/-3.95	7.25	pCi/L
Radium-228	U	-8.35	+/-17.6	26.6	pCi/L
Ruthenium-106	U	4.30	+/-29.1	53.6	pCi/L
Silver-110m	U	-1.73	+/-3.38	5.85	pCi/L
Sodium-22	U	-0.065	+/-5.99	6.09	pCi/L
Thallium-208	U	-0.494	+/-4.15	7.02	pCi/L
Thorium-230	U	579	+/-924	1450	pCi/L
Thorium-234	U	51.4	+/-154	164	pCi/L
Tin-113	U	0.420	+/-4.30	7.54	pCi/L
Uranium-235	U	-4.66	+/-23.6	34.4	pCi/L
Uranium-238	U	51.4	+/-154	164	pCi/L
Yttrium-88	U	-2.07	+/-3.05	5.10	pCi/L
Zinc-65	U	9.95	+/-6.98	14.0	pCi/L
Zirconium-95	U	-0.73	+/-6.82	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.70	+/-1.44	2.05	5.00	pCi/L	DYT1	06/28/13	1615	1310081	2
Beta		16.0	+/-2.88	3.50	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-48.9	+/-114	202	300	pCi/L	MYM1	07/03/13	0040	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 327663023  
Matrix: Ground Water  
Collect Date: 12-JUN-13 09:45  
Receive Date: 14-JUN-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.7	+/-21.3	30.3		pCi/L		MXR1	06/28/13	0831 1308460	1
Americium-241	U	1.80	+/-5.51	9.05		pCi/L					
Antimony-124	U	2.77	+/-10.0	20.2		pCi/L					
Antimony-125	U	5.12	+/-9.69	18.4		pCi/L					
Barium-133	U	4.52	+/-4.68	7.94		pCi/L					
Barium-140	U	2.98	+/-13.4	22.5		pCi/L					
Beryllium-7	U	-31	+/-34.5	58.0		pCi/L					
Bismuth-212	U	2.47	+/-52.7	98.9		pCi/L					
Bismuth-214	U	11.0	+/-11.0	17.7		pCi/L					
Cerium-139	U	-0.816	+/-2.66	4.75		pCi/L					
Cerium-141	U	-1.19	+/-6.59	9.79		pCi/L					
Cerium-144	U	-6.62	+/-18.1	30.2		pCi/L					
Cesium-134	UI	0.00	+/-7.87	8.36		pCi/L					
Cesium-136	U	12.2	+/-10.8	22.9		pCi/L					
Cesium-137	U	-1.72	+/-4.41	7.08	10.0	pCi/L					
Chromium-51	U	3.90	+/-47.2	72.7		pCi/L					
Cobalt-56	U	0.287	+/-4.31	8.04		pCi/L					
Cobalt-57	U	1.28	+/-2.18	3.89		pCi/L					
Cobalt-58	U	-1.03	+/-4.25	7.71		pCi/L					
Cobalt-60	U	-0.893	+/-4.22	7.80		pCi/L					
Europium-152	U	3.36	+/-12.2	19.0		pCi/L					
Europium-154	U	-2.34	+/-12.0	22.2		pCi/L					
Europium-155	U	3.64	+/-8.67	15.4		pCi/L					
Iridium-192	U	3.27	+/-3.84	7.11		pCi/L					
Iron-59	U	-4.83	+/-10.1	17.3		pCi/L					
Lead-210	U	2.15	+/-86.4	84.4		pCi/L					
Lead-212	U	5.43	+/-9.11	12.1		pCi/L					
Lead-214	U	10.9	+/-9.56	14.7		pCi/L					
Manganese-54	U	-1.5	+/-4.00	7.12		pCi/L					
Mercury-203	U	1.73	+/-4.23	6.81		pCi/L					
Neodymium-147	U	13.0	+/-62.5	116		pCi/L					
Neptunium-239	U	14.6	+/-22.3	40.0		pCi/L					
Niobium-94	U	-1.5	+/-3.96	6.76		pCi/L					
Niobium-95	U	0.693	+/-4.42	8.32		pCi/L					
Potassium-40	U	-10.5	+/-62.4	95.9		pCi/L					
Promethium-144	U	-0.855	+/-4.24	7.35		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 327663023

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.01	+/-7.63	8.59	pCi/L
Radium-228	U	-11.7	+/-21.3	30.3	pCi/L
Ruthenium-106	U	-13.2	+/-35.8	61.9	pCi/L
Silver-110m	U	1.39	+/-3.88	7.18	pCi/L
Sodium-22	U	-0.493	+/-4.18	7.85	pCi/L
Thallium-208	U	-1.17	+/-5.20	7.72	pCi/L
Thorium-230	U	-251	+/-568	870	pCi/L
Thorium-234	U	19.7	+/-76.7	89.0	pCi/L
Tin-113	U	1.33	+/-4.84	9.02	pCi/L
Uranium-235	U	6.00	+/-21.4	32.5	pCi/L
Uranium-238	U	19.7	+/-76.7	89.0	pCi/L
Yttrium-88	U	-2.22	+/-5.83	8.79	pCi/L
Zinc-65	U	-4.56	+/-8.85	16.0	pCi/L
Zirconium-95	U	-0.803	+/-7.87	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.87	+/-2.04	2.61	5.00	pCi/L	DYT1	06/28/13	1459	1310081	2
Beta	10.6	+/-3.46	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-10.3	+/-114	200	300	pCi/L	MYM1	07/03/13	0057	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	327663024	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 13:50		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.38	+/-16.8	27.0		pCi/L		MXR1	06/28/13	0831 1308460	1
Americium-241	U	-9.2	+/-12.6	19.1		pCi/L					
Antimony-124	U	-2.09	+/-7.99	14.6		pCi/L					
Antimony-125	U	-0.49	+/-9.35	16.6		pCi/L					
Barium-133	U	4.76	+/-4.83	8.10		pCi/L					
Barium-140	U	-6.2	+/-9.89	16.9		pCi/L					
Beryllium-7	U	7.11	+/-37.4	66.7		pCi/L					
Bismuth-212	U	-31.2	+/-48.1	83.3		pCi/L					
Bismuth-214	U	-8.01	+/-10.2	14.9		pCi/L					
Cerium-139	U	2.65	+/-3.12	5.62		pCi/L					
Cerium-141	U	-3.8	+/-6.81	11.6		pCi/L					
Cerium-144	U	1.77	+/-20.9	36.6		pCi/L					
Cesium-134	U	2.83	+/-3.62	7.07		pCi/L					
Cesium-136	U	-4.03	+/-10.2	17.8		pCi/L					
Cesium-137	U	-1.07	+/-4.24	6.48	10.0	pCi/L					
Chromium-51	U	-34.3	+/-40.8	69.8		pCi/L					
Cobalt-56	U	1.15	+/-3.99	7.41		pCi/L					
Cobalt-57	U	-0.183	+/-2.69	4.70		pCi/L					
Cobalt-58	U	-1.43	+/-3.79	6.68		pCi/L					
Cobalt-60	U	2.01	+/-3.63	7.20		pCi/L					
Europium-152	U	3.77	+/-9.89	17.7		pCi/L					
Europium-154	U	1.97	+/-10.5	20.0		pCi/L					
Europium-155	U	6.17	+/-10.1	18.3		pCi/L					
Iridium-192	U	2.96	+/-3.74	6.97		pCi/L					
Iron-59	U	3.18	+/-8.94	16.6		pCi/L					
Lead-210	U	67.1	+/-304	350		pCi/L					
Lead-212	UI	0.00	+/-12.8	12.8		pCi/L					
Lead-214	U	1.41	+/-13.6	15.5		pCi/L					
Manganese-54	U	0.110	+/-3.48	6.35		pCi/L					
Mercury-203	U	0.359	+/-5.48	7.11		pCi/L					
Neodymium-147	U	-50.9	+/-64.0	106		pCi/L					
Neptunium-239	U	1.05	+/-27.3	48.1		pCi/L					
Niobium-94	U	-1.99	+/-3.20	5.56		pCi/L					
Niobium-95	U	1.89	+/-3.81	7.23		pCi/L					
Potassium-40	U	40.6	+/-56.3	61.7		pCi/L					
Promethium-144	U	1.91	+/-3.59	6.75		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 43

Sample ID: 327663024

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.496	+/-4.25	7.60	pCi/L
Radium-228	U	6.38	+/-16.8	27.0	pCi/L
Ruthenium-106	U	37.5	+/-32.3	61.9	pCi/L
Silver-110m	U	-3.51	+/-3.84	5.43	pCi/L
Sodium-22	U	0.788	+/-3.73	7.11	pCi/L
Thallium-208	U	0.139	+/-4.57	7.11	pCi/L
Thorium-230	U	1260	+/-997	1560	pCi/L
Thorium-234	U	119	+/-162	219	pCi/L
Tin-113	U	-0.201	+/-4.53	8.06	pCi/L
Uranium-235	U	-16.8	+/-23.8	36.8	pCi/L
Uranium-238	U	119	+/-162	219	pCi/L
Yttrium-88	U	-1.39	+/-4.79	8.49	pCi/L
Zinc-65	U	1.47	+/-7.74	14.2	pCi/L
Zirconium-95	U	-1.34	+/-6.75	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.657	+/-1.80	3.57	5.00	pCi/L	DYT1	06/28/13	1518	1310081	2
Beta		5.47	+/-2.90	4.33	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-111	+/-112	203	300	pCi/L	MYM1	07/03/13	0113	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	327663025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	11-JUN-13 10:10		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.823	+/-15.3	27.6		pCi/L		MXR1	06/28/13	0832 1308460	1
Americium-241	U	-2.11	+/-24.8	40.1		pCi/L					
Antimony-124	U	3.20	+/-8.98	18.5		pCi/L					
Antimony-125	U	-2.4	+/-8.15	14.4		pCi/L					
Barium-133	U	-0.775	+/-3.82	6.85		pCi/L					
Barium-140	U	-0.81	+/-14.6	19.2		pCi/L					
Beryllium-7	U	7.17	+/-29.4	54.3		pCi/L					
Bismuth-212	U	70.0	+/-44.3	94.9		pCi/L					
Bismuth-214	U	3.93	+/-12.1	11.8		pCi/L					
Cerium-139	U	-1.99	+/-3.05	4.47		pCi/L					
Cerium-141	U	-3.64	+/-8.26	10.6		pCi/L					
Cerium-144	U	-12.8	+/-18.0	30.2		pCi/L					
Cesium-134	U	-1.43	+/-3.58	6.43		pCi/L					
Cesium-136	U	11.1	+/-5.84	19.3		pCi/L					
Cesium-137	U	0.204	+/-3.58	6.11	10.0	pCi/L					
Chromium-51	U	-21	+/-33.9	59.2		pCi/L					
Cobalt-56	U	0.023	+/-3.41	6.40		pCi/L					
Cobalt-57	U	-0.276	+/-2.45	4.30		pCi/L					
Cobalt-58	U	-0.382	+/-3.26	6.07		pCi/L					
Cobalt-60	U	0.0463	+/-3.96	7.59		pCi/L					
Europium-152	U	-3.64	+/-9.78	15.1		pCi/L					
Europium-154	U	4.35	+/-12.0	20.6		pCi/L					
Europium-155	U	1.68	+/-9.71	17.5		pCi/L					
Iridium-192	U	0.417	+/-3.12	5.77		pCi/L					
Iron-59	U	0.274	+/-8.18	13.4		pCi/L					
Lead-210	U	1010	+/-909	1150		pCi/L					
Lead-212	U	3.82	+/-8.19	9.95		pCi/L					
Lead-214	U	-0.242	+/-8.36	13.8		pCi/L					
Manganese-54	U	-0.589	+/-3.01	5.53		pCi/L					
Mercury-203	U	2.00	+/-3.36	6.42		pCi/L					
Neodymium-147	U	29.1	+/-56.7	107		pCi/L					
Neptunium-239	U	-22.4	+/-25.8	43.3		pCi/L					
Niobium-94	U	0.296	+/-2.78	5.29		pCi/L					
Niobium-95	U	-4.22	+/-4.65	7.23		pCi/L					
Potassium-40	U	40.8	+/-52.5	66.9		pCi/L					
Promethium-144	U	0.341	+/-3.29	6.18		pCi/L					

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 44 Project: WNUC00124  
Sample ID: 327663025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.37	+/-3.90	6.82	pCi/L
Radium-228	U	0.823	+/-15.3	27.6	pCi/L
Ruthenium-106	U	22.8	+/-29.1	56.1	pCi/L
Silver-110m	U	-1.48	+/-3.70	5.38	pCi/L
Sodium-22	U	1.48	+/-4.24	7.24	pCi/L
Thallium-208	U	2.83	+/-6.70	5.42	pCi/L
Thorium-230	U	1010	+/-1800	2170	pCi/L
Thorium-234	U	81.7	+/-230	395	pCi/L
Tin-113	U	0.146	+/-3.66	6.73	pCi/L
Uranium-235	U	14.7	+/-31.6	28.9	pCi/L
Uranium-238	U	81.7	+/-230	395	pCi/L
Yttrium-88	U	4.72	+/-3.44	8.53	pCi/L
Zinc-65	U	-3.07	+/-9.22	11.0	pCi/L
Zirconium-95	U	-0.571	+/-6.80	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.40	+/-1.07	1.64	5.00	pCi/L	DYT1	06/28/13	1500	1310081	2
Beta		5.35	+/-1.77	2.67	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-53.9	+/-114	202	300	pCi/L	MYM1	07/03/13	0129	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	327663026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUN-13 08:47		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-12.2	+/-20.3	31.1		pCi/L		MXR1	06/28/13	0832 1308460	1
Americium-241	U	-5.51	+/-21.2	37.9		pCi/L					
Antimony-124	U	-4.61	+/-8.51	15.2		pCi/L					
Antimony-125	U	-2.43	+/-10.8	18.6		pCi/L					
Barium-133	U	-0.303	+/-5.21	8.05		pCi/L					
Barium-140	U	-4.8	+/-11.8	21.2		pCi/L					
Beryllium-7	U	18.3	+/-38.9	70.1		pCi/L					
Bismuth-212	U	-51.1	+/-62.6	95.7		pCi/L					
Bismuth-214	U	9.87	+/-14.6	15.3		pCi/L					
Cerium-139	U	-1.17	+/-3.49	5.87		pCi/L					
Cerium-141	UI	0.00	+/-8.70	12.5		pCi/L					
Cerium-144	U	-13.4	+/-22.1	37.1		pCi/L					
Cesium-134	U	-2.04	+/-4.06	6.97		pCi/L					
Cesium-136	U	2.45	+/-11.4	21.6		pCi/L					
Cesium-137	U	2.94	+/-4.43	8.42	10.0	pCi/L					
Chromium-51	U	4.25	+/-41.5	74.4		pCi/L					
Cobalt-56	U	-0.787	+/-4.99	8.75		pCi/L					
Cobalt-57	U	-0.663	+/-3.07	5.28		pCi/L					
Cobalt-58	U	-0.719	+/-4.49	7.94		pCi/L					
Cobalt-60	U	-2.82	+/-4.84	6.81		pCi/L					
Europium-152	U	-7.36	+/-11.5	19.6		pCi/L					
Europium-154	U	-0.418	+/-12.6	23.2		pCi/L					
Europium-155	U	6.67	+/-11.3	20.6		pCi/L					
Iridium-192	U	-0.505	+/-3.97	7.01		pCi/L					
Iron-59	U	-2.96	+/-11.3	17.2		pCi/L					
Lead-210	U	-721	+/-794	1110		pCi/L					
Lead-212	U	4.00	+/-9.97	12.5		pCi/L					
Lead-214	U	11.2	+/-13.7	16.9		pCi/L					
Manganese-54	U	1.67	+/-3.97	7.43		pCi/L					
Mercury-203	U	-2.97	+/-4.34	7.46		pCi/L					
Neodymium-147	U	43.2	+/-58.8	115		pCi/L					
Neptunium-239	U	-14.2	+/-30.3	51.7		pCi/L					
Niobium-94	U	-0.436	+/-3.62	6.48		pCi/L					
Niobium-95	U	7.04	+/-5.51	8.45		pCi/L					
Potassium-40	U	65.0	+/-79.7	74.6		pCi/L					
Promethium-144	U	5.17	+/-3.98	7.90		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 47 Project: WNUC00124  
Sample ID: 327663026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.827	+/-4.65	8.05	pCi/L
Radium-228	U	-12.2	+/-20.3	31.1	pCi/L
Ruthenium-106	U	6.17	+/-34.2	56.1	pCi/L
Silver-110m	U	3.52	+/-5.81	7.14	pCi/L
Sodium-22	U	-0.148	+/-4.43	8.17	pCi/L
Thallium-208	U	0.167	+/-4.98	7.74	pCi/L
Thorium-230	U	-1170	+/-1550	2400	pCi/L
Thorium-234	U	-127	+/-246	409	pCi/L
Tin-113	U	-0.267	+/-5.05	8.87	pCi/L
Uranium-235	U	27.3	+/-36.6	44.9	pCi/L
Uranium-238	U	-127	+/-246	409	pCi/L
Yttrium-88	U	-2.01	+/-4.34	7.74	pCi/L
Zinc-65	U	-1.59	+/-9.69	17.5	pCi/L
Zirconium-95	U	2.45	+/-8.08	15.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.83	+/-2.19	3.30	5.00	pCi/L	DYT1	07/01/13	1514	1310081	2
Beta		89.8	+/-7.96	4.48	5.00	pCi/L					
Alpha		3.84	+/-3.29	3.65	5.00	pCi/L	DYT1	07/02/13	1227	1310081	3
Beta		96.4	+/-8.53	5.32	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	7.81	+/-118	205	300	pCi/L	MYM1	07/03/13	0146	1308615	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID: WELL 47  
Sample ID: 327663026

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	327663027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	12-JUN-13 10:11		
Receive Date:	14-JUN-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.28	+/-16.7	30.0		pCi/L		MXR1	06/28/13	0832 1308460	1
Americium-241	U	28.9	+/-29.5	56.5		pCi/L					
Antimony-124	U	-2.4	+/-10.3	19.4		pCi/L					
Antimony-125	U	5.33	+/-8.95	17.2		pCi/L					
Barium-133	U	-2.33	+/-4.47	7.77		pCi/L					
Barium-140	U	4.69	+/-11.7	21.7		pCi/L					
Beryllium-7	U	0.423	+/-40.5	63.8		pCi/L					
Bismuth-212	U	38.0	+/-48.7	91.4		pCi/L					
Bismuth-214	U	6.80	+/-11.3	17.4		pCi/L					
Cerium-139	U	-0.707	+/-3.04	5.19		pCi/L					
Cerium-141	U	-0.242	+/-6.26	10.9		pCi/L					
Cerium-144	U	-5.87	+/-20.6	35.4		pCi/L					
Cesium-134	U	0.514	+/-3.64	7.03		pCi/L					
Cesium-136	U	-3.36	+/-10.6	19.1		pCi/L					
Cesium-137	U	-0.153	+/-3.63	6.48	10.0	pCi/L					
Chromium-51	U	15.4	+/-37.7	70.9		pCi/L					
Cobalt-56	U	1.01	+/-4.28	8.19		pCi/L					
Cobalt-57	U	-2.34	+/-2.67	4.43		pCi/L					
Cobalt-58	U	-2.62	+/-3.20	5.41		pCi/L					
Cobalt-60	U	-1.17	+/-4.70	7.48		pCi/L					
Europium-152	U	1.64	+/-10.8	19.1		pCi/L					
Europium-154	U	-4.32	+/-11.9	22.0		pCi/L					
Europium-155	U	1.09	+/-10.7	19.1		pCi/L					
Iridium-192	U	0.314	+/-3.41	6.28		pCi/L					
Iron-59	U	2.66	+/-7.71	15.4		pCi/L					
Lead-210	U	719	+/-1220	2320		pCi/L					
Lead-212	UI	0.00	+/-9.78	9.78		pCi/L					
Lead-214	U	3.62	+/-9.86	16.3		pCi/L					
Manganese-54	U	0.0733	+/-3.61	6.80		pCi/L					
Mercury-203	U	0.399	+/-4.18	6.95		pCi/L					
Neodymium-147	U	-2.76	+/-55.6	101		pCi/L					
Neptunium-239	U	-2.57	+/-29.9	46.9		pCi/L					
Niobium-94	U	-0.78	+/-3.39	6.22		pCi/L					
Niobium-95	U	0.304	+/-6.03	6.82		pCi/L					
Potassium-40	U	43.0	+/-53.3	68.6		pCi/L					
Promethium-144	U	0.687	+/-3.89	7.35		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 9, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	327663027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.070	+/-4.29	7.78	pCi/L
Radium-228	U	-0.28	+/-16.7	30.0	pCi/L
Ruthenium-106	U	13.6	+/-31.3	59.1	pCi/L
Silver-110m	U	-0.707	+/-3.43	6.35	pCi/L
Sodium-22	U	-1.6	+/-4.19	7.71	pCi/L
Thallium-208	U	2.20	+/-4.93	8.49	pCi/L
Thorium-230	U	1980	+/-2780	2600	pCi/L
Thorium-234	U	-172	+/-274	389	pCi/L
Tin-113	U	0.732	+/-4.61	8.22	pCi/L
Uranium-235	U	10.8	+/-20.4	36.7	pCi/L
Uranium-238	U	-172	+/-274	389	pCi/L
Yttrium-88	U	-5.4	+/-3.64	3.83	pCi/L
Zinc-65	U	-4.37	+/-8.49	14.6	pCi/L
Zirconium-95	U	-4.52	+/-8.16	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.30	+/-1.66	2.43	5.00	pCi/L	DYT1	06/28/13	1615	1310081	2
Beta		7.33	+/-2.30	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-50.7	+/-118	210	300	pCi/L	MYM1	07/03/13	0202	1308615	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.7	(15%-125%)

### Notes:

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

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## QC Summary

Report Date: July 9, 2013

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 327663

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308459										
QC1202893385	327663001	DUP									
Actinium-228	U	1.20	U	0.723	pCi/L	N/A		N/A MXR1		06/28/13	06:06
	Uncertainty	+/-17.9		+/-24.6							
Americium-241	U	-0.546	U	-19.9	pCi/L	N/A		N/A			
	Uncertainty	+/-28.7		+/-19.6							
Antimony-124	U	0.275	U	2.65	pCi/L	N/A		N/A			
	Uncertainty	+/-10.0		+/-8.85							
Antimony-125	U	4.00	U	14.4	pCi/L	N/A		N/A			
	Uncertainty	+/-8.47		+/-10.7							
Barium-133	U	-0.717	U	-3.46	pCi/L	N/A		N/A			
	Uncertainty	+/-4.34		+/-5.28							
Barium-140	U	-3.2	U	-6.64	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-9.17							
Beryllium-7	U	-7.29	U	-11.4	pCi/L	N/A		N/A			
	Uncertainty	+/-32.3		+/-40.7							
Bismuth-212	U	39.8	U	80.7	pCi/L	N/A		N/A			
	Uncertainty	+/-48.7		+/-59.7							
Bismuth-214	U	6.86	U	6.43	pCi/L	N/A		N/A			
	Uncertainty	+/-14.5		+/-15.0							
Cerium-139	U	-2.47	U	-0.0474	pCi/L	N/A		N/A			
	Uncertainty	+/-3.36		+/-3.48							
Cerium-141	U	-9.19	U	-3.64	pCi/L	N/A		N/A			
	Uncertainty	+/-7.05		+/-7.74							
Cerium-144	U	14.9	U	29.4	pCi/L	N/A		N/A			
	Uncertainty	+/-22.1		+/-26.3							
Cesium-134	U	4.84	U	1.19	pCi/L	N/A		N/A			
	Uncertainty	+/-4.16		+/-4.39							
Cesium-136	U	1.29	U	3.54	pCi/L	N/A		N/A			
	Uncertainty	+/-8.86		+/-12.0							
Cesium-137	U	2.93	U	-0.0298	pCi/L	N/A		N/A			
	Uncertainty	+/-3.66		+/-4.23							
Chromium-51	U	-9.38	U	-6.75	pCi/L	N/A		N/A			
	Uncertainty	+/-41.5		+/-47.0							
Cobalt-56	U	-2.91	U	1.50	pCi/L	N/A		N/A			
	Uncertainty	+/-3.88		+/-4.80							
Cobalt-57	U	0.421	U	0.591	pCi/L	N/A		N/A			
	Uncertainty	+/-2.73		+/-3.14							
Cobalt-58	U	0.852	U	-0.92	pCi/L	N/A		N/A			
	Uncertainty	+/-4.04		+/-4.33							
Cobalt-60	U	-0.0398	U	1.19	pCi/L	N/A		N/A			
	Uncertainty										



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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308459										
		+/-4.18		+/-3.76							
Europium-152	U	4.77	U	1.94	pCi/L	N/A		N/A	MXR1	06/28/13	06:06
	Uncertainty	+/-10.1		+/-12.3							
Europium-154	U	5.52	U	9.36	pCi/L	N/A		N/A			
	Uncertainty	+/-12.3		+/-10.1							
Europium-155	U	1.54	U	-3.17	pCi/L	N/A		N/A			
	Uncertainty	+/-14.5		+/-13.1							
Iridium-192	U	3.98	U	0.122	pCi/L	N/A		N/A			
	Uncertainty	+/-4.01		+/-4.39							
Iron-59	U	-0.712	U	-3.21	pCi/L	N/A		N/A			
	Uncertainty	+/-9.05		+/-8.22							
Lead-210	U	-287	U	56.0	pCi/L	N/A		N/A			
	Uncertainty	+/-1230		+/-566							
Lead-212	U	9.14	U	-7.83	pCi/L	N/A		N/A			
	Uncertainty	+/-7.75		+/-9.77							
Lead-214	U	-12.9	U	-2.8	pCi/L	N/A		N/A			
	Uncertainty	+/-9.54		+/-11.5							
Manganese-54	U	0.521	U	-1.09	pCi/L	N/A		N/A			
	Uncertainty	+/-4.40		+/-4.51							
Mercury-203	U	0.0252	U	-8.4	pCi/L	N/A		N/A			
	Uncertainty	+/-3.93		+/-6.01							
Neodymium-147	U	0.403	U	-8.55	pCi/L	N/A		N/A			
	Uncertainty	+/-56.3		+/-66.7							
Neptunium-239	U	-11.6	U	15.6	pCi/L	N/A		N/A			
	Uncertainty	+/-30.9		+/-32.4							
Niobium-94	U	-0.729	U	-0.353	pCi/L	N/A		N/A			
	Uncertainty	+/-3.45		+/-5.03							
Niobium-95	U	3.50	U	3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-3.48		+/-4.96							
Potassium-40	U	32.0	U	-24.3	pCi/L	N/A		N/A			
	Uncertainty	+/-60.3		+/-42.3							
Promethium-144	U	1.73	U	0.930	pCi/L	N/A		N/A			
	Uncertainty	+/-3.50		+/-4.65							
Promethium-146	U	1.07	U	-0.039	pCi/L	N/A		N/A			
	Uncertainty	+/-3.94		+/-5.21							
Radium-228	U	1.20	U	0.723	pCi/L	N/A		N/A			
	Uncertainty	+/-17.9		+/-24.6							
Ruthenium-106	U	-14.7	U	33.0	pCi/L	N/A		N/A			
	Uncertainty	+/-30.0		+/-36.9							
Silver-110m	U	-1.86	U	-0.634	pCi/L	N/A		N/A			
	Uncertainty	+/-3.48		+/-3.70							
Sodium-22	U	2.30	U	3.31	pCi/L	N/A		N/A			
	Uncertainty	+/-4.30		+/-3.56							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308459										
Thallium-208	U	1.36	U	4.61	pCi/L	N/A			N/A		
	Uncertainty	+/-6.01		+/-6.91							
Thorium-230	U	-95	U	782	pCi/L	N/A			N/A MXR1	06/28/13	06:06
	Uncertainty	+/-1790		+/-1470							
Thorium-234	U	49.7	U	72.7	pCi/L	N/A			N/A		
	Uncertainty	+/-413		+/-202							
Tin-113	U	0.389	U	-3.68	pCi/L	N/A			N/A		
	Uncertainty	+/-4.55		+/-5.63							
Uranium-235	U	2.95	U	2.82	pCi/L	N/A			N/A		
	Uncertainty	+/-26.5		+/-29.1							
Uranium-238	U	49.7	U	72.7	pCi/L	N/A			N/A		
	Uncertainty	+/-413		+/-202							
Yttrium-88	U	0.0415	U	-2.17	pCi/L	N/A			N/A		
	Uncertainty	+/-3.49		+/-4.03							
Zinc-65	U	6.41	U	2.93	pCi/L	N/A			N/A		
	Uncertainty	+/-6.78		+/-8.22							
Zirconium-95	U	-1.36	U	-2.45	pCi/L	N/A			N/A		
	Uncertainty	+/-7.02		+/-8.19							
QC1202893386	LCS										
Actinium-228			U	-76.8	pCi/L					06/27/13	12:20
	Uncertainty			+/-306							
Americium-241	11000			11300	pCi/L		102	(75%-125%)			
	Uncertainty			+/-600							
Antimony-124			U	29.8	pCi/L						
	Uncertainty			+/-65.2							
Antimony-125			U	-0.465	pCi/L						
	Uncertainty			+/-167							
Barium-133			U	80.4	pCi/L						
	Uncertainty			+/-74.6							
Barium-140			U	-13.4	pCi/L						
	Uncertainty			+/-30.2							
Beryllium-7			U	-8.81	pCi/L						
	Uncertainty			+/-531							
Bismuth-212			U	314	pCi/L						
	Uncertainty			+/-767							
Bismuth-214			U	17.5	pCi/L						
	Uncertainty			+/-106							
Cerium-139			U	20.0	pCi/L						
	Uncertainty			+/-39.7							
Cerium-141			U	6.63	pCi/L						
	Uncertainty			+/-53.5							
Cerium-144			U	-83.5	pCi/L						
	Uncertainty			+/-249							
Cesium-134			U	54.4	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308459										
	Uncertainty			+/-69.3							
Cesium-136			U	15.1	pCi/L				MXR1	06/27/13	12:20
	Uncertainty			+/-105							
Cesium-137	23800			23200	pCi/L		97.3	(75%-125%)			
	Uncertainty			+/-282							
Chromium-51			U	-414	pCi/L						
	Uncertainty			+/-445							
Cobalt-56			U	37.0	pCi/L						
	Uncertainty			+/-66.8							
Cobalt-57				454	pCi/L						
	Uncertainty			+/-54.0							
Cobalt-58			U	25.5	pCi/L						
	Uncertainty			+/-63.1							
Cobalt-60	20700			19700	pCi/L		95.1	(75%-125%)			
	Uncertainty			+/-316							
Europium-152			U	-9.07	pCi/L						
	Uncertainty			+/-149							
Europium-154			U	10.8	pCi/L						
	Uncertainty			+/-113							
Europium-155			U	-29.7	pCi/L						
	Uncertainty			+/-120							
Iridium-192			U	18.0	pCi/L						
	Uncertainty			+/-45.2							
Iron-59			U	-0.128	pCi/L						
	Uncertainty			+/-150							
Lead-210				94500	pCi/L						
	Uncertainty			+/-13200							
Lead-212			U	11.1	pCi/L						
	Uncertainty			+/-77.7							
Lead-214			U	-50.1	pCi/L						
	Uncertainty			+/-112							
Manganese-54			U	29.6	pCi/L						
	Uncertainty			+/-65.3							
Mercury-203			U	-18.2	pCi/L						
	Uncertainty			+/-44.3							
Neodymium-147			U	-14.6	pCi/L						
	Uncertainty			+/-382							
Neptunium-239			U	-64.1	pCi/L						
	Uncertainty			+/-326							
Niobium-94			U	-9.96	pCi/L						
	Uncertainty			+/-48.7							
Niobium-95			U	8.40	pCi/L						
	Uncertainty			+/-57.1							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308459										
Potassium-40			U	-107	pCi/L						
	Uncertainty			+/-266							
Promethium-144			U	13.7	pCi/L				MXR1	06/27/13	12:20
	Uncertainty			+/-48.1							
Promethium-146			U	67.1	pCi/L						
	Uncertainty			+/-84.5							
Radium-228			U	-76.8	pCi/L						
	Uncertainty			+/-306							
Ruthenium-106			U	214	pCi/L						
	Uncertainty			+/-476							
Silver-110m				1680	pCi/L						
	Uncertainty			+/-92.9							
Sodium-22			U	14.1	pCi/L						
	Uncertainty			+/-39.0							
Thallium-208			U	0.0811	pCi/L						
	Uncertainty			+/-54.6							
Thorium-230			U	3960	pCi/L						
	Uncertainty			+/-13600							
Thorium-234			U	-637	pCi/L						
	Uncertainty			+/-1870							
Tin-113			U	-68.8	pCi/L						
	Uncertainty			+/-69.2							
Uranium-235			U	-91.8	pCi/L						
	Uncertainty			+/-228							
Uranium-238			U	-637	pCi/L						
	Uncertainty			+/-1870							
Yttrium-88				74.1	pCi/L						
	Uncertainty			+/-50.5							
Zinc-65			U	27.5	pCi/L						
	Uncertainty			+/-157							
Zirconium-95			U	46.3	pCi/L						
	Uncertainty			+/-100							
QC1202893384	MB										
Actinium-228			U	-4.43	pCi/L					06/28/13	06:05
	Uncertainty			+/-16.9							
Americium-241			U	19.6	pCi/L						
	Uncertainty			+/-26.8							
Antimony-124			U	-0.86	pCi/L						
	Uncertainty			+/-8.76							
Antimony-125			U	-5.83	pCi/L						
	Uncertainty			+/-9.60							
Barium-133			U	-1.29	pCi/L						
	Uncertainty			+/-4.48							
Barium-140			U	-2.05	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308459										
	Uncertainty			+/-4.44							
Beryllium-7			U	13.1	pCi/L				MXR1	06/28/13	06:05
	Uncertainty			+/-26.6							
Bismuth-212			U	66.2	pCi/L						
	Uncertainty			+/-54.4							
Bismuth-214			U	1.46	pCi/L						
	Uncertainty			+/-12.7							
Cerium-139			U	-0.328	pCi/L						
	Uncertainty			+/-3.17							
Cerium-141			U	-0.407	pCi/L						
	Uncertainty			+/-5.15							
Cerium-144			U	0.0599	pCi/L						
	Uncertainty			+/-18.8							
Cesium-134			UI	0.00	pCi/L						
	Uncertainty			+/-5.27							
Cesium-136			U	2.21	pCi/L						
	Uncertainty			+/-4.59							
Cesium-137			U	1.92	pCi/L						
	Uncertainty			+/-3.28							
Chromium-51			U	24.0	pCi/L						
	Uncertainty			+/-27.4							
Cobalt-56			U	2.71	pCi/L						
	Uncertainty			+/-3.62							
Cobalt-57			U	-0.311	pCi/L						
	Uncertainty			+/-2.54							
Cobalt-58			U	-2.14	pCi/L						
	Uncertainty			+/-3.66							
Cobalt-60			U	1.03	pCi/L						
	Uncertainty			+/-4.71							
Europium-152			U	-7.04	pCi/L						
	Uncertainty			+/-10.1							
Europium-154			U	-0.118	pCi/L						
	Uncertainty			+/-10.1							
Europium-155			U	-4.2	pCi/L						
	Uncertainty			+/-12.2							
Iridium-192			U	0.0668	pCi/L						
	Uncertainty			+/-3.06							
Iron-59			U	-4.07	pCi/L						
	Uncertainty			+/-6.29							
Lead-210			U	-3.07	pCi/L						
	Uncertainty			+/-1320							
Lead-212			U	1.41	pCi/L						
	Uncertainty			+/-8.67							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308459										
Lead-214			U	-10.7	pCi/L						
	Uncertainty			+/-9.59							
Manganese-54			U	1.33	pCi/L				MXR1	06/28/13	06:05
	Uncertainty			+/-3.36							
Mercury-203			U	-1.53	pCi/L						
	Uncertainty			+/-3.21							
Neodymium-147			U	-2.24	pCi/L						
	Uncertainty			+/-25.3							
Neptunium-239			U	-1.61	pCi/L						
	Uncertainty			+/-27.2							
Niobium-94			U	-2.26	pCi/L						
	Uncertainty			+/-3.46							
Niobium-95			U	2.83	pCi/L						
	Uncertainty			+/-3.75							
Potassium-40			U	-12.1	pCi/L						
	Uncertainty			+/-49.8							
Promethium-144			U	0.435	pCi/L						
	Uncertainty			+/-3.83							
Promethium-146			U	0.946	pCi/L						
	Uncertainty			+/-4.17							
Radium-228			U	-4.43	pCi/L						
	Uncertainty			+/-16.9							
Ruthenium-106			U	-24.6	pCi/L						
	Uncertainty			+/-36.5							
Silver-110m			U	-2.57	pCi/L						
	Uncertainty			+/-3.46							
Sodium-22			U	-0.435	pCi/L						
	Uncertainty			+/-3.60							
Thallium-208			U	-0.714	pCi/L						
	Uncertainty			+/-5.11							
Thorium-230			U	-524	pCi/L						
	Uncertainty			+/-1660							
Thorium-234			U	18.2	pCi/L						
	Uncertainty			+/-314							
Tin-113			U	1.89	pCi/L						
	Uncertainty			+/-3.97							
Uranium-235			U	-19.4	pCi/L						
	Uncertainty			+/-25.5							
Uranium-238			U	18.2	pCi/L						
	Uncertainty			+/-314							
Yttrium-88			U	0.200	pCi/L						
	Uncertainty			+/-4.23							
Zinc-65			U	1.13	pCi/L						
	Uncertainty			+/-9.09							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308459										
Zirconium-95			U	5.51	pCi/L						
	Uncertainty			+/-5.10							
Batch	1308460										
QC1202893388 327663021 DUP											
Actinium-228	U	7.46	U	3.60	pCi/L	N/A		N/A	MXR1	06/28/13	06:44
	Uncertainty	+/-12.3		+/-18.6							
Americium-241	U	6.34	U	-26.3	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-17.0							
Antimony-124	U	-0.0839	U	-2.58	pCi/L	N/A		N/A			
	Uncertainty	+/-9.05		+/-8.59							
Antimony-125	U	0.739	U	5.58	pCi/L	N/A		N/A			
	Uncertainty	+/-7.94		+/-9.22							
Barium-133	UI	0.00	U	3.28	pCi/L	N/A		N/A			
	Uncertainty	+/-9.58		+/-5.13							
Barium-140	U	-7.64	U	7.35	pCi/L	N/A		N/A			
	Uncertainty	+/-9.18		+/-10.7							
Beryllium-7	U	-16.4	U	-24.6	pCi/L	N/A		N/A			
	Uncertainty	+/-26.0		+/-34.5							
Bismuth-212	U	10.6	U	-16.7	pCi/L	N/A		N/A			
	Uncertainty	+/-38.8		+/-54.8							
Bismuth-214	U	6.88	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-6.54		+/-14.0							
Cerium-139	U	0.206	U	-1.6	pCi/L	N/A		N/A			
	Uncertainty	+/-2.63		+/-3.32							
Cerium-141	U	6.30	U	4.16	pCi/L	N/A		N/A			
	Uncertainty	+/-7.70		+/-7.83							
Cerium-144	U	-3.06	U	12.7	pCi/L	N/A		N/A			
	Uncertainty	+/-17.3		+/-24.2							
Cesium-134	U	0.225	U	6.78	pCi/L	N/A		N/A			
	Uncertainty	+/-2.85		+/-3.21							
Cesium-136	U	1.32	U	-8.32	pCi/L	N/A		N/A			
	Uncertainty	+/-8.83		+/-9.98							
Cesium-137	U	3.16	U	-0.603	pCi/L	N/A		N/A			
	Uncertainty	+/-3.12		+/-4.77							
Chromium-51	U	32.5	U	-5.95	pCi/L	N/A		N/A			
	Uncertainty	+/-39.0		+/-40.5							
Cobalt-56	U	-1.63	U	0.360	pCi/L	N/A		N/A			
	Uncertainty	+/-3.61		+/-3.85							
Cobalt-57	U	-1.28	U	-0.486	pCi/L	N/A		N/A			
	Uncertainty	+/-2.45		+/-3.21							
Cobalt-58	U	0.463	U	3.79	pCi/L	N/A		N/A			
	Uncertainty	+/-3.02		+/-4.04							
Cobalt-60	U	1.63	U	-0.227	pCi/L	N/A		N/A			
	Uncertainty	+/-3.07		+/-3.50							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308460										
Europium-152	U	0.441	U	4.59	pCi/L	N/A		N/A			
	Uncertainty	+/-8.87		+/-10.2							
Europium-154	U	3.08	U	3.26	pCi/L	N/A		N/A MXR1		06/28/13	06:44
	Uncertainty	+/-8.77		+/-9.68							
Europium-155	U	3.70	U	-2.97	pCi/L	N/A		N/A			
	Uncertainty	+/-8.44		+/-11.3							
Iridium-192	U	0.166	U	-2.47	pCi/L	N/A		N/A			
	Uncertainty	+/-3.58		+/-3.74							
Iron-59	U	-4.18	U	0.527	pCi/L	N/A		N/A			
	Uncertainty	+/-8.25		+/-8.56							
Lead-210	U	-156	U	129	pCi/L	N/A		N/A			
	Uncertainty	+/-285		+/-643							
Lead-212	U	-0.565	U	-9.47	pCi/L	N/A		N/A			
	Uncertainty	+/-6.19		+/-8.08							
Lead-214	U	4.24	U	9.86	pCi/L	N/A		N/A			
	Uncertainty	+/-8.54		+/-10.1							
Manganese-54	U	-0.513	U	-1.74	pCi/L	N/A		N/A			
	Uncertainty	+/-3.29		+/-3.35							
Mercury-203	U	0.224	U	3.04	pCi/L	N/A		N/A			
	Uncertainty	+/-3.39		+/-4.03							
Neodymium-147	U	-30.1	U	-14.7	pCi/L	N/A		N/A			
	Uncertainty	+/-47.8		+/-62.5							
Neptunium-239	U	-20	U	-3.81	pCi/L	N/A		N/A			
	Uncertainty	+/-27.9		+/-33.7							
Niobium-94	U	2.87	U	-0.537	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-3.45							
Niobium-95	U	2.46	U	1.94	pCi/L	N/A		N/A			
	Uncertainty	+/-3.42		+/-3.45							
Potassium-40	U	-20.6	U	39.9	pCi/L	N/A		N/A			
	Uncertainty	+/-43.0		+/-59.9							
Promethium-144	U	-2.42	U	3.91	pCi/L	N/A		N/A			
	Uncertainty	+/-4.92		+/-3.65							
Promethium-146	U	2.20	U	-0.839	pCi/L	N/A		N/A			
	Uncertainty	+/-3.86		+/-4.22							
Radium-228	U	7.46	U	3.60	pCi/L	N/A		N/A			
	Uncertainty	+/-12.3		+/-18.6							
Ruthenium-106	U	-20.2	U	-35.7	pCi/L	N/A		N/A			
	Uncertainty	+/-28.8		+/-32.7							
Silver-110m	U	-1.1	U	-6.04	pCi/L	N/A		N/A			
	Uncertainty	+/-2.96		+/-3.82							
Sodium-22	U	-0.163	U	1.32	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-3.45							
Thallium-208	U	2.20	U	2.32	pCi/L	N/A		N/A			
	Uncertainty	+/-4.86		+/-4.50							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308460										
Thorium-230	U	42.8	U	-66.9	pCi/L	N/A			N/A		
	Uncertainty	+/-896		+/-1250							
Thorium-234	U	-229	U	-137	pCi/L	N/A			N/A MXR1	06/28/13	06:44
	Uncertainty	+/-144		+/-171							
Tin-113	U	-0.142	U	4.36	pCi/L	N/A			N/A		
	Uncertainty	+/-3.94		+/-4.62							
Uranium-235	U	19.6	U	-10.1	pCi/L	N/A			N/A		
	Uncertainty	+/-24.0		+/-26.7							
Uranium-238	U	-229	U	-137	pCi/L	N/A			N/A		
	Uncertainty	+/-144		+/-171							
Yttrium-88	U	1.94	U	-1.84	pCi/L	N/A			N/A		
	Uncertainty	+/-3.65		+/-3.79							
Zinc-65	U	-3.7	U	-3.73	pCi/L	N/A			N/A		
	Uncertainty	+/-7.14		+/-7.93							
Zirconium-95	U	-0.14	U	1.23	pCi/L	N/A			N/A		
	Uncertainty	+/-5.03		+/-6.69							
QC1202893389	LCS										
Actinium-228			U	22.2	pCi/L					06/28/13	06:57
	Uncertainty			+/-317							
Americium-241	11000			10500	pCi/L		95.4	(75%-125%)			
	Uncertainty			+/-784							
Antimony-124			U	11.7	pCi/L						
	Uncertainty			+/-51.6							
Antimony-125			U	-15.2	pCi/L						
	Uncertainty			+/-175							
Barium-133			U	-30.9	pCi/L						
	Uncertainty			+/-69.6							
Barium-140			U	6.43	pCi/L						
	Uncertainty			+/-31.7							
Beryllium-7			U	-128	pCi/L						
	Uncertainty			+/-567							
Bismuth-212			U	420	pCi/L						
	Uncertainty			+/-796							
Bismuth-214			U	-48.1	pCi/L						
	Uncertainty			+/-113							
Cerium-139			U	35.4	pCi/L						
	Uncertainty			+/-39.8							
Cerium-141			U	-32.4	pCi/L						
	Uncertainty			+/-62.3							
Cerium-144			U	46.2	pCi/L						
	Uncertainty			+/-296							
Cesium-134			U	16.7	pCi/L						
	Uncertainty			+/-72.4							
Cesium-136			U	51.9	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308460										
	Uncertainty			+/-116							
Cesium-137	23800			23100	pCi/L		97	(75%-125%)	MXR1	06/28/13	06:57
	Uncertainty			+/-309							
Chromium-51			U	267	pCi/L						
	Uncertainty			+/-431							
Cobalt-56			U	-20.3	pCi/L						
	Uncertainty			+/-70.1							
Cobalt-57				420	pCi/L						
	Uncertainty			+/-57.4							
Cobalt-58			U	-18.8	pCi/L						
	Uncertainty			+/-64.4							
Cobalt-60	20700			19900	pCi/L		96	(75%-125%)			
	Uncertainty			+/-346							
Europium-152			U	89.2	pCi/L						
	Uncertainty			+/-158							
Europium-154			U	47.4	pCi/L						
	Uncertainty			+/-104							
Europium-155			U	131	pCi/L						
	Uncertainty			+/-161							
Iridium-192			U	-13.8	pCi/L						
	Uncertainty			+/-56.4							
Iron-59			U	-45.1	pCi/L						
	Uncertainty			+/-158							
Lead-210				1.09E+05	pCi/L						
	Uncertainty			+/-30100							
Lead-212			U	-15	pCi/L						
	Uncertainty			+/-83.8							
Lead-214			U	18.1	pCi/L						
	Uncertainty			+/-121							
Manganese-54			U	38.0	pCi/L						
	Uncertainty			+/-67.5							
Mercury-203			U	30.6	pCi/L						
	Uncertainty			+/-49.1							
Neodymium-147			U	-173	pCi/L						
	Uncertainty			+/-429							
Neptunium-239			U	-191	pCi/L						
	Uncertainty			+/-377							
Niobium-94			U	-43.1	pCi/L						
	Uncertainty			+/-50.3							
Niobium-95			U	12.0	pCi/L						
	Uncertainty			+/-59.8							
Potassium-40			U	209	pCi/L						
	Uncertainty			+/-257							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308460										
Promethium-144			U	-0.832	pCi/L						
	Uncertainty			+/-49.8							
Promethium-146			U	54.0	pCi/L				MXR1	06/28/13	06:57
	Uncertainty			+/-88.3							
Radium-228			U	22.2	pCi/L						
	Uncertainty			+/-317							
Ruthenium-106			U	-448	pCi/L						
	Uncertainty			+/-529							
Silver-110m			U	102	pCi/L						
	Uncertainty			+/-68.4							
Sodium-22			U	18.3	pCi/L						
	Uncertainty			+/-36.7							
Thallium-208			U	28.5	pCi/L						
	Uncertainty			+/-59.2							
Thorium-230			U	-3420	pCi/L						
	Uncertainty			+/-20700							
Thorium-234			U	681	pCi/L						
	Uncertainty			+/-3100							
Tin-113			U	48.6	pCi/L						
	Uncertainty			+/-74.9							
Uranium-235			U	-8.43	pCi/L						
	Uncertainty			+/-258							
Uranium-238			U	681	pCi/L						
	Uncertainty			+/-3100							
Yttrium-88			U	59.9	pCi/L						
	Uncertainty			+/-34.2							
Zinc-65			U	-25.2	pCi/L						
	Uncertainty			+/-172							
Zirconium-95			U	43.8	pCi/L						
	Uncertainty			+/-120							
QC1202893387	MB										
Actinium-228			U	22.4	pCi/L					06/28/13	06:51
	Uncertainty			+/-24.7							
Americium-241			U	-10.6	pCi/L						
	Uncertainty			+/-26.0							
Antimony-124			U	-3.11	pCi/L						
	Uncertainty			+/-9.15							
Antimony-125			U	4.63	pCi/L						
	Uncertainty			+/-11.8							
Barium-133			U	1.45	pCi/L						
	Uncertainty			+/-5.28							
Barium-140			U	8.68	pCi/L						
	Uncertainty			+/-5.29							
Beryllium-7			U	14.8	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1308460										
	Uncertainty			+/-28.9							
Bismuth-212			U	-49.2	pCi/L				MXR1	06/28/13	06:51
	Uncertainty			+/-73.9							
Bismuth-214			U	0.494	pCi/L						
	Uncertainty			+/-10.7							
Cerium-139			U	-0.658	pCi/L						
	Uncertainty			+/-3.17							
Cerium-141			U	-0.968	pCi/L						
	Uncertainty			+/-5.40							
Cerium-144			U	9.40	pCi/L						
	Uncertainty			+/-21.5							
Cesium-134			U	0.868	pCi/L						
	Uncertainty			+/-4.19							
Cesium-136			U	-2.66	pCi/L						
	Uncertainty			+/-5.78							
Cesium-137			U	-2.54	pCi/L						
	Uncertainty			+/-4.21							
Chromium-51			U	-7.03	pCi/L						
	Uncertainty			+/-34.2							
Cobalt-56			U	3.49	pCi/L						
	Uncertainty			+/-3.55							
Cobalt-57			U	-0.798	pCi/L						
	Uncertainty			+/-2.77							
Cobalt-58			U	-1.1	pCi/L						
	Uncertainty			+/-3.77							
Cobalt-60			U	-2.94	pCi/L						
	Uncertainty			+/-4.58							
Europium-152			U	-6.96	pCi/L						
	Uncertainty			+/-11.5							
Europium-154			U	8.10	pCi/L						
	Uncertainty			+/-7.76							
Europium-155			U	15.0	pCi/L						
	Uncertainty			+/-11.3							
Iridium-192			U	0.121	pCi/L						
	Uncertainty			+/-3.83							
Iron-59			U	-4.93	pCi/L						
	Uncertainty			+/-7.29							
Lead-210			U	-22.6	pCi/L						
	Uncertainty			+/-1040							
Lead-212			U	2.92	pCi/L						
	Uncertainty			+/-11.0							
Lead-214			U	-9.34	pCi/L						
	Uncertainty			+/-11.3							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1308460										
Manganese-54			U	1.88	pCi/L						
	Uncertainty			+/-3.46							
Mercury-203			U	2.11	pCi/L				MXR1	06/28/13	06:51
	Uncertainty			+/-3.70							
Neodymium-147			U	-14.8	pCi/L						
	Uncertainty			+/-30.5							
Neptunium-239			U	-23	pCi/L						
	Uncertainty			+/-31.7							
Niobium-94			U	0.804	pCi/L						
	Uncertainty			+/-4.08							
Niobium-95			U	4.08	pCi/L						
	Uncertainty			+/-3.25							
Potassium-40			U	-39.9	pCi/L						
	Uncertainty			+/-54.5							
Promethium-144			U	-0.525	pCi/L						
	Uncertainty			+/-4.19							
Promethium-146			U	-2.54	pCi/L						
	Uncertainty			+/-4.46							
Radium-228			U	22.4	pCi/L						
	Uncertainty			+/-24.7							
Ruthenium-106			U	-20.5	pCi/L						
	Uncertainty			+/-29.9							
Silver-110m			U	0.195	pCi/L						
	Uncertainty			+/-3.47							
Sodium-22			U	2.84	pCi/L						
	Uncertainty			+/-2.72							
Thallium-208			U	1.21	pCi/L						
	Uncertainty			+/-6.15							
Thorium-230			U	-2480	pCi/L						
	Uncertainty			+/-1650							
Thorium-234			U	266	pCi/L						
	Uncertainty			+/-388							
Tin-113			U	-4.25	pCi/L						
	Uncertainty			+/-5.43							
Uranium-235			U	-13.9	pCi/L						
	Uncertainty			+/-27.2							
Uranium-238			U	266	pCi/L						
	Uncertainty			+/-388							
Yttrium-88			U	2.83	pCi/L						
	Uncertainty			+/-3.62							
Zinc-65			U	-7.72	pCi/L						
	Uncertainty			+/-9.37							
Zirconium-95			U	3.53	pCi/L						
	Uncertainty			+/-6.53							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1310080										
QC1202897564	327663003	DUP									
Alpha	U	2.24		6.06	pCi/L	91.9		(0% - 100%)	DYT1	06/28/13	15:12
	Uncertainty	+/-2.75		+/-4.28							
Beta		102		112	pCi/L	9.70		(0%-20%)			
	Uncertainty	+/-8.03		+/-9.15							
QC1202897565	LCS										
Alpha		123		138	pCi/L		112	(75%-125%)		06/28/13	15:12
	Uncertainty			+/-14.2							
Beta		485		563	pCi/L		116	(75%-125%)			
	Uncertainty			+/-20.5							
QC1202897563	MB										
Alpha			U	-0.40	pCi/L					06/28/13	15:11
	Uncertainty			+/-1.27							
Beta			U	-0.235	pCi/L						
	Uncertainty			+/-1.73							
Batch	1310081										
QC1202897567	327663023	DUP									
Alpha		2.87		3.19	pCi/L	10.4		(0% - 100%)	DYT1	06/28/13	14:59
	Uncertainty	+/-2.04		+/-2.29							
Beta		10.6		14.0	pCi/L	27.7		(0% - 100%)			
	Uncertainty	+/-3.46		+/-3.65							
QC1202897568	LCS										
Alpha		123		137	pCi/L		111	(75%-125%)		06/28/13	15:00
	Uncertainty			+/-13.0							
Beta		485		558	pCi/L		115	(75%-125%)			
	Uncertainty			+/-19.6							
QC1202897566	MB										
Alpha			U	-1.59	pCi/L					06/28/13	16:41
	Uncertainty			+/-1.59							
Beta			U	-2.63	pCi/L						
	Uncertainty			+/-2.29							
<b>Rad Liquid Scintillation</b>											
Batch	1308613										
QC1202893875	327663001	DUP									
Technetium-99	U	27.8	U	48.9	pCi/L	N/A			N/AMYM1	07/02/13	22:13
	Uncertainty	+/-107		+/-110							
QC1202893876	LCS										
Technetium-99		5790		5620	pCi/L		97.1	(75%-125%)		07/02/13	22:30
	Uncertainty			+/-256							
QC1202893874	MB										
Technetium-99			U	39.7	pCi/L					07/02/13	21:57
	Uncertainty			+/-113							
Batch	1308615										
QC1202893878	327663016	DUP									
Technetium-99	U	-53.2	U	-73	pCi/L	N/A			N/AMYM1	07/03/13	02:35
	Uncertainty	+/-117		+/-114							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1308615										
QC1202893879	LCS										
Technetium-99	5790			5600	pCi/L		96.8	(75%-125%)	MYM1	07/03/13	02:51
	Uncertainty			+/-265							
QC1202893877	MB										
Technetium-99			U	-84.3	pCi/L					07/03/13	02:19
	Uncertainty			+/-112							
Batch	1312313										
QC1202903013	327663005	DUP									
Technetium-99		353	U	248	pCi/L	34.8		(0% - 100%)	MYM1	07/07/13	13:29
	Uncertainty	+/-157		+/-157							
QC1202903014	LCS										
Technetium-99	5790			6630	pCi/L		115	(75%-125%)		07/07/13	14:01
	Uncertainty			+/-282							
QC1202903012	MB										
Technetium-99			U	25.6	pCi/L					07/07/13	12:57
	Uncertainty			+/-147							

### 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 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, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification

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## QC Summary

Workorder: 327663

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

^ 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.



**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 09 July 2013**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP A2LA ISO 17025	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Nevada	SC000122011-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-8
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



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SC Dept. of Health & Environmental Control  
 Bureau of Water/Water Monitoring, Assessment  
 and Protection Division  
 Groundwater Quality Section  
 2600 Bull Street  
 Columbia, South Carolina 29201

Direct tel: 803-647-3171  
 Direct fax: 803-695-3964  
 e-mail: logsdocj@westinghouse.com

Your ref: **Site ID # 00456**  
 Our ref: LTR-RAC-14-46

Subject: NPDES Permit #SC0001848  
 Ground Water Sampling, October 2013 through July 2014,  
 Annual Report

Date: September 26, 2014

Dear Sir or Madame:

Enclosed are results from the groundwater sampling survey completed during January 2014 and July 2014, as requested by the Bureau of Water via NPDES permit #SC0001848. In this report, we are sharing October 2013 and April 2014 results as well as the required Winter and Summer 2014 results. Westinghouse is not required to sample groundwater quarterly, but we do so in order to have the benefit of more data points.

NPDES required wells W-26, W-41, W-48, and RW-2 were sampled on October 14, 2013, January 13, 2014, April 4, 2014, and on July 14, 2014, for volatile and semi-volatile organic compounds by Shealy Environmental Services, by purging three casing volumes using a Teflon bailer, then taking four readings to ensure parameter stabilization prior to sampling using a Grundfos pump. VOC results with the associated field data sheets are attached. The table below represents the only detected results.

Well	Tetrachloroethene ug/L				Trichloroethene ug/L			
	Oct-13	Jan-14	Apr-14	Jul-14	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	130.0	140.0	110.0	120.0	12.0	9.9	8.4	5.7
W26	<1	<1	<1	<1	<1	<1	<1	<1
W41	160.0	200.0	170.0	150.0	22.0	34.0	23	22
W48	160.0	170.0	140.0	140.0	2.8	2.9	2.9	<1

Well	cis-1,2-Dichloroethene ug/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<1	<1	<1	<1
W26	1.70	1.00	<1	<1
W41	<1	1.20	<1	<1
W48	5	5.30	5.20	5.20

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The Westinghouse technician sampled the remaining NPDES required wells, during October 2013, January, April, and July 2014, by purging three casing volumes using a Teflon bailer, then sampling by also using the dedicated bailer. Analyses for ammonia, fluoride, pH and conductivity are completed by the Westinghouse chemical laboratory, while the Nitrate parameter is analyzed by Shealy Environmental Services. See the tables below for results.

	<b>Depth to Water pre-baling (feet)</b>			
<b>Well</b>	<b>Oct-13</b>	<b>Jan-14</b>	<b>Apr-14</b>	<b>Jul-14</b>
WRW-2	18.1	18.2	18.1	18.1
W7	11.9	11.3	11.4	11.7
W10	15.9	16.2	15.8	16.3
W13R	12.3	12.2	11.7	12.2
W15	12.0	12	11.9	12.5
W16	3.9	3.7	3.3	3.6
W18	11.9	11.3	11.6	11.8
W22	11.2	10	10.5	10.9
W24	10.9	10.9	9.1	11.6
W26	25.2	25.8	24.9	25.7
W29	11.6	11.8	11.5	11.7
W30	12.0	12.1	11.8	12
W32	19.1	19	18.7	19.1
W33	15.7	15.8	15.6	15.8
W39	16.1	16.1	15.9	16.2
W41	15.3	15.6	15.4	15.6
W43	15.4	15.2	14.9	15.6
W44	18.6	18.6	18.5	18.9
W47	26.2	26.6	26	26.7
W48	26.2	26.7	25.8	26.8

	<b>Conductivity umho/cm</b>			
<b>Well</b>	<b>Oct-13</b>	<b>Jan-14</b>	<b>Apr-14</b>	<b>Jul-14</b>
WRW-2	310.00	426.00	388.00	357.00
W7	1830.00	169.9	1690.00	1729
W10	756.00	815	740.00	833
W13R	881.00	857	852.00	837
W15	428.00	404	412.00	431
W16	296.00	311	325.00	333
W18	4430.00	4.6	5120.00	5560
W22	2500.00	660	1601.00	1690
W24	59.70	59.20	59.20	58.20
W26	182.40	203.00	176.00	180.60
W29	1778.00	1059	917.00	901
W30	1233.00	119.3	638.00	749
W32	1814.00	1570	1194.00	1405
W33	148.10	144.00	197.00	173.80
W39	472.00	679.00	949.00	755.00
W41	522.00	479.00	576.00	595.00
W43	107.50	96.40	103.80	96.30
W44	89.60	100.80	98.00	92.50
W47	551.00	520	495.00	511
W48	111.30	113.20	115.50	129.20



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	pH			
Well	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	5.92	7.43	4.42	4.44
W7	7.22	6.78	7.08	7.19
W10	5.82	5.56	5.89	6.09
W13R	6.48	6.49	6.48	6.52
W15	6.29	6.39	6.22	6.42
W16	6.29	6.23	6.29	6.31
W18	7.76	7.21	7.25	7.57
W22	5.33	5.01	4.45	5.24
W24	5.44	5.61	5.61	6.42
W26	5.48	5.82	5.55	5.56
W29	6.75	6.66	6.60	7.08
W30	5.74	6.3	6.57	6.87
W32	7.14	6.66	6.44	6.97
W33	5.54	5.64	5.71	5.65
W39	5.43	5.30	5.24	5.29
W41	5.68	5.63	5.99	5.59
W43	5.40	5.51	5.61	5.89
W44	5.25	5.34	5.44	5.41
W47	6.08	6.25	6.11	6.26
W48	5.57	5.61	6.00	5.62

	Ammonia mg/L			
Well	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<1	<1	<1	<1
W7	55.9	49.4	45.50	53.7
W10	6.19	2.33	4.63	7.54
W13R	48.1	47.5	43.20	49.6
W15	12.7	12.9	13.40	14.7
W16	15.3	17.8	18.10	19.2
W18	103	103	97.50	139
W22	65	24.4	30.90	69
W24	<1	<1	<1	<1
W26	<1	<1	<1	<1
W29	19.7	12.6	10.20	16.2
W30	<1	1.5	<1	<1
W32	69.6	63.7	57.80	64.2
W33	<1	<1	<1	<1
W39	<1	<1	<1	<1
W41	<1	<1	<1	<1
W43	<1	<1	<1	<1
W44	<1	<1	<1	<1
W47	18.9	19.4	19.40	19.6
W48	<1	<1	<1	<1





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Well	Fluoride mg/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<0.5	<0.5	<0.5	<0.5
W7	8.15	7.3	7.80	8.25
W10	2.20	2.74	2.35	2.67
W13R	10.20	11.3	9.50	10.1
W15	2.80	2.36	2.48	2.27
W16	9.65	9.3	8.20	9.2
W18	7.60	7.4	6.70	7.55
W22	15.80	5.3	8.25	8.15
W24	<0.5	<0.5	<0.5	<0.5
W26	1.91	1.84	1.91	2.09
W29	4.44	5	4.90	5.8
W30	16.60	12.6	11.30	11.5
W32	3.53	3.61	3.40	4.35
W33	<0.5	<0.5	<0.5	<0.5
W39	<0.5	<0.5	<0.5	<0.5
W41	<0.5	<0.5	<0.5	<0.5
W43	<0.5	<0.5	<0.5	<0.5
W44	<0.5	<0.5	<0.5	<0.5
W47	5.85	5.35	5.85	5.1
W48	<0.5	<0.5	<0.5	<0.5

Well	Nitrate mg/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	28.00	41.00	33.00	34.00
W7	160.00	130	130.00	150
W10	39.00	59	41.00	59
W13R	31.00	30	28.00	30
W15	23.00	21	20.00	470
W16	1.90	0.2	2.20	15
W18	510.00	560	530.00	690
W22	260.00	56	140.00	210
W24	0.04	0.07	0.05	<0.02
W26	4.80	9.30	3.30	3.80
W29	170.00	97	70.00	78
W30	140.00	100	36.00	40
W32	180.00	150	120.00	150
W33	8.10	7.90	12.00	110.00
W39	56.00	13.00	99.00	92.00
W41	43.00	46.00	50.00	62.00
W43	3.40	5.30	6.40	6.50
W44	2.80	3.70	3.10	5.40
W47	37.00	27	24.00	29
W48	5.20	11.00	4.70	4.70

1. Wells exceeding drinking water standards for fluoride (4 mg/l) or nitrate (10 mg/l) are marked in red.



Radiological results for Gross Alpha, Gross Beta and Tritium are tabulated below. Gamma results (fission and activation products) are attached, as reported by General Engineering Laboratories (GEL).

Well	Gross Alpha pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	3.05	4.45	2.66	4.09
W7	5.12	3.9	5.23	7.58
W10	5.02	2.78	4.26	2.97
W13R	2.56	5.85	1.15	0.945
W15	0.37	1.96	2.14	5.31
W16	0.00	0	2.25	1.41
W18	19.90	13.4	23.50	13.2
W22	8.13	11.9	6.67	9.6
W24	4.88	1.30	0.00	1.18
W26	1.86	0.53	1.74	0.71
W29	6.94	0	3.78	6.11
W30	19.50	18.5	24.30	48.1
W32	14.70	9.78	14.20	5.48
W33	3.17	0.00	1.80	5.18
W39	5.31	0.00	0.92	7.17
W41	2.40	0.69	5.75	4.19
W43	7.35	0.00	1.02	1.05
W44	2.88	0.00	0.00	2.18
W47	9.98	2.86	2.73	3.91
W48	6.70	0.00	1.02	0.00

Well	Gross Beta pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	12.50	22.90	14.80	14.10
W7	164.00	144	127.00	147
W10	73.40	97.1	66.70	79.2
W13R	140.00	155	120.00	97.6
W15	268.00	241	191.00	204
W16	16.10	22.4	18.30	12.8
W18	248.00	204	175.00	156
W22	91.20	56.7	46.10	59.7
W24	2.34	0.00	0.00	0.10
W26	13.50	17.40	4.63	7.83
W29	32.10	13.1	11.40	10.4
W30	61.80	42.3	33.20	60.4
W32	273.00	250	276.00	253
W33	9.44	10.10	5.52	6.38
W39	19.30	15.30	18.70	17.40
W41	19.30	17.60	16.50	24.30
W43	11.20	2.11	1.23	8.38
W44	4.21	4.75	5.79	0.59
W47	102.00	2.92	63.60	58.8
W48	16.60	9.86	10.20	12.60





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Well	Tritium pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	0.00	232.00	32.40	242.00
W7	0.00	32.7	365.00	11.5
W10	3.28	120	222.00	213
W13R	0.00	70.2	254.00	0.344
W15	16.00	66.9	339.00	30.2
W16	72.70	155	12.30	45.3
W18	244.00	14	362.00	181
W22	0.00	78.8	0.00	246
W24	62.10	141.00	61.30	0.00
W26	0.00	128.00	154.00	0.00
W29	168.00	373	303.00	0
W30	0.00	362	0.00	125
W32	56.50	243	128.00	0
W33	0.00	219.00	204.00	0.00
W39	0.00	50.50	252.00	140.00
W41	105.00	40.60	193.00	0.00
W43	0.00	244.00	191.00	0.00
W44	0.00	59.60	205.00	0.00
W47	139.00	296	370.00	14.7
W48	0.00	60.30	418.00	0.00

Please contact me at (803) 647-3171 if you have any questions regarding these results.

Sincerely,  
 WESTINGHOUSE ELECTRIC COMPANY LLC

Cynthia J. Logsdon  
 Principal Environmental Engineer  
 Environment, Health & Safety  
 Columbia Fuel Fabrication Facility, Westinghouse Electric Company

Enclosures/

- a) Shealy Environmental Services lab report, VOC analytical results
- b) GEL lab report, radiological analytical results



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>October 14, 2013</b>	
Field Personnel	<b>BTF</b>		
Facility Name	<b>Westinghouse</b>		
Well ID #	<b>RW-2</b>		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	<b>31.25</b>		
Depth To Groundwater (DGW) =	<b>18.11</b>		
Length Of Water Column (LWC) =	<b>13.14</b>		
1 Casing Volume (OCV) = LWC x	<b>0.163</b>	=	<b>2.1</b> gal.
3 Casing Volumes =	<b>6.4</b>	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	2.1	4.2	6.4			
0129	0932	0976	0939			
460	449	447	447			
241	20	20	19.1			
194	272.5	282	281	310.7		
1	1	1	1			
1	1	1	1			

Well Sample Time: **0942**  
 Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 14, 2013	
Field Personnel	BTF	
Facility Name	Westinghouse	
Well ID #	MW-26	
Weather Conditions	Air Temperature	°C.
Total Well Depth (TWD) =	32.00	
Depth To Groundwater (DGW) =	25.16	
Length Of Water Column (LWC) =	6.84	
1 Casing Volume (OCV) = LWC x	0.163	= 1.1 gal.
3 Casing Volumes =	3.3	gal. = Standard Evacuation Volume
Total Volume of Water Removed =		gal.
Method of Well Evacuation	(TB) SSB WW GP Other	
Method of Sample Collection	(TB) SSB WW GP Other	

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

1st	1.1	2.2	3.3	Well Sample Time:
1014	1616	1019	1621	1023
5.52	5.58	5.43	5.42	
19.4	18.4	18.8	18.8	
158.6	154.3	160	161	181.8
1	1	1	1	
1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 14, 2013		
Field Personnel	BTF		
Facility Name	Westinghouse		
Well ID #	MW-41		
Weather Conditions	Air Temperature		
Total Well Depth (TWD) =	27.00		
Depth To Groundwater (DGW) =	15.30		
Length Of Water Column (LWC) =	11.7		
1 Casing Volume (OCV) = LWC x	0.163	=	1.9 gal.
3 Casing Volumes =	5.7	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

**Evacuation and Collection Methods**  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

1st	1.9	3.8	5.7	Well Sample Time: 1003
0452	0455	0458	1001	Remarks:
6.23	5.83	5.85	5.85	
26	26	20	19.9	
169	482	472	472	521.0
1	1	1	1	
1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

**October 14, 2013**

Date (MM-DD-YY)	October 14, 2013			
Field Personnel	BTF			
Facility Name	Westinghouse			
Well ID #	MW-48			
Weather Conditions	Air Temperature		°C.	
Total Well Depth (TWD) =	44,06			
Depth To Groundwater (DGW) =	26.15			
Length Of Water Column (LWC) =	17.85			
1 Casing Volume (OCV) = LWC x	0.651	=	11.6	gal.
3 Casing Volumes =	35	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.			
Method of Well Evacuation	TB	SSB	WW	GP Other
Method of Sample Collection	(TB)	SSB	WW	GP Other
Casing Diameter:	4	inches	Casing Material:	RVC - Metal
Guard Pipe:	PVC-Metal	- No	Locking Cap:	Y N
Protective Abutment:	Y	-(N)	Integrity Satisfactory:	Y - N
Well Yield:	Low - Mod. - High			
Remarks:				

<i>Evacuation and Collection Methods</i>	<i>Constants for Casing Diameters</i>
TB - Teflon Bailor	1.5" = 0.092
SSB - Stainless Steel Bailor	5" = 1.02
W/W - Well Wizard	2" = 0.163
GP - Grunfos Pump	3" = 0.367
	7" = 2.00
	4" = 0.652
	8" = 2.61

Well Sample Time: 1056			
Remarks:			
1 <sup>st</sup>	11.6	22	
1037	1643	1049	
5.52	5.50	5.67	
19.4	19.6	19.8	
109	107	102	112.8
1	1	1	
1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: OJ14019  
Date Completed: 10/29/2013



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* OJ 14019 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

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## Case Narrative

### Westinghouse Electric Company

Lot Number: OJ14019

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: OJ14019

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	10/14/2013 0942	10/14/2013
002	MW-26	Aqueous	10/14/2013 1023	10/14/2013
003	MW-41	Aqueous	10/14/2013 1003	10/14/2013
004	MW-48	Aqueous	10/14/2013 1050	10/14/2013
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: OJ14019

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	130		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	12		ug/L	7
002	MW-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.7		ug/L	11
003	MW-41	Aqueous	Tetrachloroethene	8260B	160		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	22		ug/L	17
004	MW-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.0		ug/L	21
004	MW-48	Aqueous	Tetrachloroethene	8260B	160		ug/L	22
004	MW-48	Aqueous	Trichloroethene	8260B	2.8		ug/L	22

(8 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 10/14/2013 0942	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 0942	BTF		
1		(Specific Con) 120.1	1	10/14/2013 0942	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 0942	BTF		
1		(Water level )	1	10/14/2013 0942	BTF		
1		(Well Depth)	1	10/14/2013 0942	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.47			su	1
Specific Conductance @ 25° C - Field		120.1	311		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	18.11			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/14/2013 0942							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1403	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/14/2013 0942							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1403	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	130		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	12		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		91	70-130

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## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/14/2013 0942

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0116	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/14/2013 0942

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0116	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		78	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		70	24-127
Nitrobenzene-d5		72	38-127
Phenol-d5		73	28-128
Terphenyl-d14		58	10-148

PQL = Practical quantitation limit

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P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-002
Description: MW-26	Matrix: Aqueous
Date Sampled: 10/14/2013 1023	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1023	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1023	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1023	BTF		
1		(Water level )	1	10/14/2013 1023	BTF		
1		(Well Depth)	1	10/14/2013 1023	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.42			su	1
Specific Conductance @ 25° C - Field		120.1	182		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.8			° C	1
Water level depth from top of casing		No Method	25.16			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1425	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.7		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1425	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-002

Description: MW-26

Matrix: Aqueous

Date Sampled: 10/14/2013 1023

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0141	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0141	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		82	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		69	24-127
Nitrobenzene-d5		72	38-127
Phenol-d5		70	28-128
Terphenyl-d14		51	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 10/14/2013 1003	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1003	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1003	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1003	BTF		
1		(Water level )	1	10/14/2013 1003	BTF		
1		(Well Depth)	1	10/14/2013 1003	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.85			su	1
Specific Conductance @ 25° C - Field		120.1	522		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	15.30			feet	1
Well Depth		No Method	27.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1448	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1448	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	160		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	22		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/14/2013 1003

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0206	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0206	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		83	41-144
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		72	24-127
Nitrobenzene-d5		73	38-127
Phenol-d5		74	28-128
Terphenyl-d14		76	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-004
Description: MW-48	Matrix: Aqueous
Date Sampled: 10/14/2013 1050	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1050	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1050	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1050	BTF		
1		(Water level )	1	10/14/2013 1050	BTF		
1		(Well Depth)	1	10/14/2013 1050	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.67			su	1
Specific Conductance @ 25° C - Field		120.1	113		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.8			° C	1
Water level depth from top of casing		No Method	26.15			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-004			
Description: MW-48				Matrix: Aqueous			
Date Sampled: 10/14/2013 1050							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	10/19/2013 1511	ALL		32343	
Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run	
Acetone	67-64-1	8260B	ND		20	ug/L	1	
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1	
Acrolein	107-02-8	8260B	ND		20	ug/L	1	
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	ug/L	1	
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1	
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1	
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1	
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1	
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1	
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1	
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1	
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	5.0		1.0	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1	
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1	
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1	
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1	
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1	
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1	
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1	
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1	

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-004			
Description: MW-48				Matrix: Aqueous			
Date Sampled: 10/14/2013 1050							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1511	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	160		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.8		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-004

Description: MW-48

Matrix: Aqueous

Date Sampled: 10/14/2013 1050

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0231	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.2	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.2	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.2	ug/L	1
Anthracene	120-12-7	8270D	ND		5.2	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.2	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.2	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.2	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.2	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.2	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.2	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.2	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.2	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		26	ug/L	1
Carbazole	86-74-8	8270D	ND		5.2	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.2	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.2	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.2	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.2	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.2	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.2	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.2	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.2	ug/L	1
Chrysene	218-01-9	8270D	ND		5.2	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.2	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.2	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.2	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.2	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.2	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.2	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.2	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.2	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.2	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.2	ug/L	1
Fluorene	86-73-7	8270D	ND		5.2	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.2	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.2	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-004

Description: MW-48

Matrix: Aqueous

Date Sampled: 10/14/2013 1050

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0231	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.2	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.2	ug/L	1
Isophorone	78-59-1	8270D	ND		5.2	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.2	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.2	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.2	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.2	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.2	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.2	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.2	ug/L	1
Phenol	108-95-2	8270D	ND		5.2	ug/L	1
Pyrene	129-00-0	8270D	ND		5.2	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.2	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.2	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		79	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		68	24-127
Nitrobenzene-d5		71	38-127
Phenol-d5		69	28-128
Terphenyl-d14		82	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 33319

Client: <u>Westinghouse</u>		Report to Contact		Sampler (Printed Name): <u>Brian Feland</u>		Quote No.
Address		Telephone No. / Fax No. / Email		Waybill No.		Page <u>1</u> of <u>1</u>
City: <u>Colts</u>	State: <u>SC</u>	Zip Code	Preservative			
Project Name: <u>Well Sampling</u>			1. Unpres. 4. HNO <sub>3</sub> 7. NaOH			
Project Number			2. NaOH/ZnA 5. HCL			
P.O. Number			3. H <sub>2</sub> SO <sub>4</sub> 6. Na Thio.			
Sample ID / Description (Containers for each sample may be combined on one line)		Date 263	Time	Matrix		Bottle (See Instructions on back) Preservative Lot No. <u>0514019</u>
RW-2		10/14/17	0942	C-Composite		
MW-26			1023	GW DWWW S		
MW-41			1003	Other		
MW-48			1050			
Turn Around Time Required (Prior approval required for expedited TAT): <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)				Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
1. Relinquished by / Sampler <u>31</u>		Date: <u>10/14/17</u>	Time: <u>1215</u>	QC Requirements (Specify)		1. Received by
2. Relinquished by		Date	Time	1. Received by		Date
3. Relinquished by		Date	Time	2. Received by		Date
4. Relinquished by		Date	Time	3. Received by		Date
Note: All samples are retained for six weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on lot (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Receipt Temp. <u>1.8</u> °C		4. Laboratory Received by <u>[Signature]</u>		Time: <u>1215</u>

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 13

Page 1 of 1  
Replaces Date: 09/24/13  
Effective Date: 09/26/13

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: ELC 10/14/13 Lot #: 0514019

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>1339/2-11-8</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>-0.3</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH <sub>3</sub> /TKN/cyanide/phenol		
Sample labels verified by: <u>CMT</u> Date: <u>10/14/13</u>		

### Corrective Action taken, if necessary:

Was client notified: Yes ☐ No ☐

Did client respond: Yes ☐ No ☐

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments:





November 27, 2013

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

Re: Environmental - PO 4500467846  
Work Order: 335887

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 18, 2013. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500467846  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

335887

VENDOR: General Engineering Laboratories (GEL)Month: OctYear: 2013

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/14/13 09:42	1000	X	X	X		X	REC
WELL	#3A	10/16/13 09:57	1000	X	X	X		X	REC
WELL	#7	10/15/13 11:30	1000	X	X	X		X	REC
WELL	#10	10/15/13 13:05	1000	X	X	X		X	REC
WELL	#13R	10/15/13 11:08	1000	X	X	X		X	REC
WELL	#14	10/14/13 14:05	1000	X	X	X		X	REC
WELL	#15	10/14/13 13:21	1000	X	X	X		X	REC
WELL	#16	10/14/13 14:20	1000	X	X	X		X	REC
WELL	#17	10/15/13 10:17	1000	X	X	X		X	REC
WELL	#18	10/15/13 09:46	1000	X	X	X		X	REC
WELL	#20	10/16/13 10:36	1000	X	X	X		X	REC
WELL	#22	10/15/13 09:21	1000	X	X	X		X	REC
WELL	#23R	10/14/13 13:39	1000	X	X	X		X	REC
WELL	#24	10/14/13 11:16	1000	X	X	X		X	REC
WELL	#26	10/14/13 10:23	1000	X	X	X		X	REC
WELL	#27	10/16/13 10:15	1000	X	X	X		X	REC
WELL	#28	10/15/13 10:44	1000	X	X	X		X	REC
WELL	#29	10/15/13 08:47	1000	X	X	X		X	REC
WELL	#30	10/15/13 09:06	1000	X	X	X		X	REC
WELL	#32	10/15/13 13:25	1000	X	X	X		X	REC
WELL	#33	10/14/13 11:37	1000	X	X	X		X	REC
WELL	#38	10/14/13 09:00	1000	X	X	X		X	REC
WELL	#39	10/16/13 11:24	1000	X	X	X		X	REC
WELL	#41R	10/14/13 10:03	1000	X	X	X		X	REC
WELL	#43	10/16/13 11:42	1000	X	X	X		X	REC

Please email [crewsr@westinghouse.com](mailto:crewsr@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 10/17/13

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This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.





## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUE</u>		SDG/AR/COC/Work Order: <u>335887</u>	
Received By: <u>SE</u>		Date Received: <u>10.18.13</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags    Blue ice    Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>41502182</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?		<input checked="" type="checkbox"/>		(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected: <u>1 bottle per ID</u>
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground <u>UPS</u> Field Services    Courier    Other  <u>1Z 222A0 @13 9559 6404</u> <u>9430 7996</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 335887 GEL Work Order: 335887

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 335887001  
Matrix: Ground Water  
Collect Date: 14-OCT-13 09:42  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.48	+/-27.9	33.2		pCi/L		RXF2	11/01/13	0903 1341420	1
Americium-241	U	7.21	+/-22.7	36.5		pCi/L					
Antimony-124	U	12.6	+/-9.93	22.6		pCi/L					
Antimony-125	U	-0.513	+/-10.9	19.5		pCi/L					
Barium-133	U	-2.19	+/-5.62	9.86		pCi/L					
Barium-140	U	-2.09	+/-11.2	21.0		pCi/L					
Beryllium-7	U	44.3	+/-95.2	75.7		pCi/L					
Bismuth-212	U	-39	+/-64.9	108		pCi/L					
Bismuth-214	U	5.73	+/-16.0	16.5		pCi/L					
Cerium-139	U	-1.29	+/-3.85	6.56		pCi/L					
Cerium-141	U	-1.45	+/-8.72	14.5		pCi/L					
Cerium-144	U	2.03	+/-24.7	43.3		pCi/L					
Cesium-134	U	-3.04	+/-4.25	7.38		pCi/L					
Cesium-136	U	9.23	+/-12.6	25.1		pCi/L					
Cesium-137	U	2.77	+/-6.06	7.78	10.0	pCi/L					
Chromium-51	U	-51.8	+/-49.9	82.2		pCi/L					
Cobalt-56	U	1.92	+/-4.57	8.71		pCi/L					
Cobalt-57	U	-0.677	+/-3.12	5.43		pCi/L					
Cobalt-58	U	-3.18	+/-4.75	8.27		pCi/L					
Cobalt-60	U	-4.42	+/-4.30	6.84		pCi/L					
Europium-152	U	3.29	+/-11.6	21.2		pCi/L					
Europium-154	U	-7.01	+/-10.5	17.7		pCi/L					
Europium-155	U	-0.878	+/-12.4	21.9		pCi/L					
Iridium-192	U	5.31	+/-4.46	8.51		pCi/L					
Iron-59	U	-0.462	+/-7.94	14.8		pCi/L					
Lead-210	U	-651	+/-637	957		pCi/L					
Lead-212	U	9.27	+/-10.6	13.1		pCi/L					
Lead-214	U	-1.19	+/-10.9	17.5		pCi/L					
Manganese-54	U	1.01	+/-4.68	8.68		pCi/L					
Mercury-203	U	4.50	+/-6.63	8.67		pCi/L					
Neodymium-147	U	18.8	+/-76.4	139		pCi/L					
Neptunium-239	U	-12.6	+/-32.5	56.1		pCi/L					
Niobium-94	U	0.540	+/-3.96	7.07		pCi/L					
Niobium-95	U	-2.12	+/-5.05	8.55		pCi/L					
Potassium-40	U	-48.5	+/-54.2	86.7		pCi/L					
Promethium-144	U	-1.04	+/-4.26	7.36		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 335887001

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.372	+/-5.01	8.92	pCi/L
Radium-228	U	6.48	+/-27.9	33.2	pCi/L
Ruthenium-106	U	-2.35	+/-44.5	70.9	pCi/L
Silver-110m	U	2.02	+/-4.42	7.19	pCi/L
Sodium-22	U	-2.75	+/-3.75	6.28	pCi/L
Thallium-208	U	-0.11	+/-4.84	7.60	pCi/L
Thorium-230	U	-116	+/-1560	2440	pCi/L
Thorium-234	U	289	+/-353	293	pCi/L
Tin-113	U	-1.79	+/-5.44	9.56	pCi/L
Uranium-235	U	11.5	+/-31.4	44.9	pCi/L
Uranium-238	U	289	+/-353	293	pCi/L
Yttrium-88	U	-0.296	+/-3.79	7.42	pCi/L
Zinc-65	U	2.79	+/-7.73	15.0	pCi/L
Zirconium-95	U	-3.29	+/-9.53	13.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.05	+/-2.92	4.69	5.00	pCi/L	JAOC	11/06/13	2112	1341307	2
Beta		12.5	+/-2.85	3.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-41.5	+/-133	236	300	pCi/L	MYM1	11/05/13	0003	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 335887002  
Matrix: Ground Water  
Collect Date: 16-OCT-13 09:57  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.2	+/-15.1	25.3		pCi/L		RXF2	11/01/13	0904 1341420	1
Americium-241	U	2.75	+/-21.3	33.6		pCi/L					
Antimony-124	U	3.49	+/-9.71	19.5		pCi/L					
Antimony-125	U	-2.61	+/-8.74	15.7		pCi/L					
Barium-133	U	-2.31	+/-5.05	7.34		pCi/L					
Barium-140	U	-5.58	+/-11.8	17.7		pCi/L					
Beryllium-7	U	-19.5	+/-28.6	49.6		pCi/L					
Bismuth-212	U	17.5	+/-46.2	86.4		pCi/L					
Bismuth-214	U	3.42	+/-8.62	14.7		pCi/L					
Cerium-139	U	-1.32	+/-2.85	4.99		pCi/L					
Cerium-141	U	1.75	+/-8.01	10.2		pCi/L					
Cerium-144	U	2.61	+/-20.7	36.5		pCi/L					
Cesium-134	U	-0.867	+/-3.46	6.09		pCi/L					
Cesium-136	U	-0.324	+/-9.07	17.0		pCi/L					
Cesium-137	U	-0.825	+/-4.28	6.94	10.0	pCi/L					
Chromium-51	U	-19.1	+/-40.9	69.2		pCi/L					
Cobalt-56	U	4.10	+/-4.49	7.28		pCi/L					
Cobalt-57	U	-0.355	+/-2.66	4.46		pCi/L					
Cobalt-58	U	-3.06	+/-4.20	6.14		pCi/L					
Cobalt-60	U	1.80	+/-3.11	5.84		pCi/L					
Europium-152	U	-1.36	+/-10.4	17.3		pCi/L					
Europium-154	U	9.54	+/-8.06	17.1		pCi/L					
Europium-155	U	-3.69	+/-10.6	17.7		pCi/L					
Iridium-192	U	3.18	+/-3.64	6.73		pCi/L					
Iron-59	U	-5.42	+/-7.03	12.0		pCi/L					
Lead-210	U	403	+/-1170	999		pCi/L					
Lead-212	U	-2.56	+/-7.56	11.7		pCi/L					
Lead-214	U	6.14	+/-12.8	14.2		pCi/L					
Manganese-54	U	0.813	+/-3.21	5.94		pCi/L					
Mercury-203	U	-0.799	+/-4.68	6.96		pCi/L					
Neodymium-147	U	29.1	+/-53.8	103		pCi/L					
Neptunium-239	U	-4.1	+/-27.2	45.6		pCi/L					
Niobium-94	U	0.128	+/-3.16	5.70		pCi/L					
Niobium-95	U	-1.09	+/-4.39	7.00		pCi/L					
Potassium-40	U	25.6	+/-47.9	86.1		pCi/L					
Promethium-144	U	-0.655	+/-3.41	6.01		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 335887002

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.416	+/-4.23	7.78	pCi/L
Radium-228	U	-9.2	+/-15.1	25.3	pCi/L
Ruthenium-106	U	-13	+/-30.0	52.3	pCi/L
Silver-110m	U	-3.52	+/-3.18	5.15	pCi/L
Sodium-22	U	3.87	+/-2.72	6.05	pCi/L
Thallium-208	U	0.933	+/-5.49	6.11	pCi/L
Thorium-230	U	1050	+/-1370	2230	pCi/L
Thorium-234	UI	0.00	+/-341	263	pCi/L
Tin-113	U	-0.0479	+/-4.51	7.84	pCi/L
Uranium-235	U	5.47	+/-25.1	33.9	pCi/L
Uranium-238	UI	0.00	+/-341	263	pCi/L
Yttrium-88	U	-3.31	+/-3.64	5.95	pCi/L
Zinc-65	U	-1.37	+/-7.79	12.2	pCi/L
Zirconium-95	U	0.273	+/-5.82	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.768	+/-2.46	4.68	5.00	pCi/L	JAOC	11/06/13	2112	1341307	2
Beta	U	-0.305	+/-1.73	3.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-135	+/-126	232	300	pCi/L	MYM1	11/05/13	0020	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 7  
Sample ID: 335887003  
Matrix: Ground Water  
Collect Date: 15-OCT-13 11:30  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.1	+/-18.9	22.3		pCi/L		RXF2	11/01/13	1134 1341420	1
Americium-241	U	8.57	+/-14.8	23.7		pCi/L					
Antimony-124	U	-4.91	+/-8.64	14.1		pCi/L					
Antimony-125	U	6.49	+/-9.14	15.2		pCi/L					
Barium-133	U	0.542	+/-4.57	7.11		pCi/L					
Barium-140	U	1.53	+/-8.96	17.6		pCi/L					
Beryllium-7	U	-10.5	+/-30.2	51.2		pCi/L					
Bismuth-212	U	-2.11	+/-46.4	84.4		pCi/L					
Bismuth-214	U	5.86	+/-12.9	15.0		pCi/L					
Cerium-139	U	-1.62	+/-2.77	4.81		pCi/L					
Cerium-141	U	5.13	+/-5.91	10.8		pCi/L					
Cerium-144	U	-4.71	+/-17.9	31.8		pCi/L					
Cesium-134	U	-3.0	+/-4.02	5.81		pCi/L					
Cesium-136	U	0.218	+/-9.46	17.4		pCi/L					
Cesium-137	U	-2.33	+/-4.62	6.82	10.0	pCi/L					
Chromium-51	U	32.3	+/-41.4	68.6		pCi/L					
Cobalt-56	U	1.66	+/-3.56	6.82		pCi/L					
Cobalt-57	U	-0.353	+/-2.33	4.17		pCi/L					
Cobalt-58	U	0.158	+/-3.77	6.89		pCi/L					
Cobalt-60	U	-2.6	+/-3.66	5.53		pCi/L					
Europium-152	U	1.82	+/-9.33	16.6		pCi/L					
Europium-154	U	-1.58	+/-7.88	14.9		pCi/L					
Europium-155	U	-2.62	+/-9.85	16.4		pCi/L					
Iridium-192	U	3.37	+/-3.52	6.19		pCi/L					
Iron-59	U	-3.45	+/-7.45	12.8		pCi/L					
Lead-210	U	276	+/-346	471		pCi/L					
Lead-212	U	-5.57	+/-6.52	10.7		pCi/L					
Lead-214	U	2.93	+/-12.1	14.0		pCi/L					
Manganese-54	U	-1.13	+/-3.05	5.36		pCi/L					
Mercury-203	U	-2.47	+/-3.71	6.27		pCi/L					
Neodymium-147	U	0.482	+/-52.2	97.2		pCi/L					
Neptunium-239	U	-9.35	+/-24.6	43.7		pCi/L					
Niobium-94	U	-1.98	+/-3.20	5.51		pCi/L					
Niobium-95	U	1.21	+/-3.64	6.86		pCi/L					
Potassium-40	U	-50.3	+/-45.5	70.9		pCi/L					
Promethium-144	U	-0.854	+/-3.61	6.40		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 7 Project: WNUC00124  
Sample ID: 335887003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.547	+/-4.09	7.22	pCi/L
Radium-228	U	-4.1	+/-18.9	22.3	pCi/L
Ruthenium-106	U	-20.2	+/-29.6	51.1	pCi/L
Silver-110m	U	-1.48	+/-3.24	4.85	pCi/L
Sodium-22	U	-0.405	+/-2.81	5.36	pCi/L
Thallium-208	U	4.95	+/-6.04	5.50	pCi/L
Thorium-230	U	-44.1	+/-1080	1630	pCi/L
Thorium-234	U	44.2	+/-177	225	pCi/L
Tin-113	U	3.40	+/-6.34	7.73	pCi/L
Uranium-235	U	21.8	+/-19.8	33.8	pCi/L
Uranium-238	U	44.2	+/-177	225	pCi/L
Yttrium-88	U	-2.14	+/-3.51	6.00	pCi/L
Zinc-65	U	-1.84	+/-6.69	11.8	pCi/L
Zirconium-95	U	-4.32	+/-6.05	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		5.12	+/-3.62	4.90	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		164	+/-8.11	2.67	5.00	pCi/L					
Alpha	U	0.817	+/-2.69	4.86	5.00	pCi/L	JAOC	11/11/13	1741	1341307	3
Beta		148	+/-5.19	3.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	145	+/-142	238	300	pCi/L	MYM1	11/05/13	0036	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	335887003	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 335887004  
Matrix: Ground Water  
Collect Date: 15-OCT-13 13:05  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.6	+/-16.5	25.4		pCi/L		RXF2	11/01/13	1135 1341420	1
Americium-241	U	-22.9	+/-30.7	51.4		pCi/L					
Antimony-124	U	-3.4	+/-8.52	15.7		pCi/L					
Antimony-125	U	-7.6	+/-9.71	16.2		pCi/L					
Barium-133	U	-3.22	+/-4.47	7.56		pCi/L					
Barium-140	U	0.955	+/-8.50	17.3		pCi/L					
Beryllium-7	U	0.535	+/-36.3	64.3		pCi/L					
Bismuth-212	U	-10.1	+/-47.5	86.6		pCi/L					
Bismuth-214	U	2.21	+/-11.0	15.2		pCi/L					
Cerium-139	U	0.618	+/-3.32	5.68		pCi/L					
Cerium-141	U	-5.58	+/-8.86	12.7		pCi/L					
Cerium-144	U	-12.1	+/-22.5	37.0		pCi/L					
Cesium-134	U	1.10	+/-3.52	6.82		pCi/L					
Cesium-136	U	2.86	+/-9.68	18.9		pCi/L					
Cesium-137	U	-2.61	+/-3.37	5.83	10.0	pCi/L					
Chromium-51	U	-11.8	+/-40.7	71.4		pCi/L					
Cobalt-56	U	1.46	+/-3.60	7.03		pCi/L					
Cobalt-57	U	-4.33	+/-2.87	4.44		pCi/L					
Cobalt-58	U	0.749	+/-3.64	6.96		pCi/L					
Cobalt-60	U	-0.918	+/-3.91	7.00		pCi/L					
Europium-152	U	-1.04	+/-9.51	16.9		pCi/L					
Europium-154	U	-7.18	+/-9.25	15.1		pCi/L					
Europium-155	U	1.54	+/-13.2	21.7		pCi/L					
Iridium-192	U	-1.12	+/-3.68	6.45		pCi/L					
Iron-59	U	-4.72	+/-7.92	13.6		pCi/L					
Lead-210	U	708	+/-1180	2160		pCi/L					
Lead-212	U	3.25	+/-9.35	12.1		pCi/L					
Lead-214	U	-6.48	+/-9.60	14.3		pCi/L					
Manganese-54	U	-1.33	+/-3.99	6.10		pCi/L					
Mercury-203	U	0.314	+/-4.12	7.43		pCi/L					
Neodymium-147	U	27.1	+/-59.4	111		pCi/L					
Neptunium-239	U	-6.23	+/-30.6	51.8		pCi/L					
Niobium-94	U	0.974	+/-3.26	6.21		pCi/L					
Niobium-95	U	4.18	+/-5.31	7.01		pCi/L					
Potassium-40	U	7.22	+/-56.6	59.7		pCi/L					
Promethium-144	U	1.73	+/-3.36	6.51		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	335887004	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.46	+/-4.17	7.68	pCi/L
Radium-228	U	-10.6	+/-16.5	25.4	pCi/L
Ruthenium-106	U	4.32	+/-31.5	56.6	pCi/L
Silver-110m	U	0.856	+/-3.10	5.97	pCi/L
Sodium-22	U	-2.87	+/-3.33	5.33	pCi/L
Thallium-208	U	0.382	+/-4.48	7.59	pCi/L
Thorium-230	U	1970	+/-3250	2960	pCi/L
Thorium-234	U	-102	+/-297	413	pCi/L
Tin-113	U	0.326	+/-5.29	8.34	pCi/L
Uranium-235	U	-22.9	+/-28.1	37.5	pCi/L
Uranium-238	U	-102	+/-297	413	pCi/L
Yttrium-88	U	-3.06	+/-3.30	5.22	pCi/L
Zinc-65	U	-1.91	+/-7.26	13.0	pCi/L
Zirconium-95	U	3.02	+/-6.64	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.51	+/-3.40	4.72	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		59.2	+/-5.14	3.44	5.00	pCi/L					
Alpha		5.02	+/-3.30	4.80	5.00	pCi/L	JAOC	11/11/13	1704	1341307	3
Beta		73.4	+/-4.87	2.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	40.4	+/-131	226	300	pCi/L	MYM1	11/05/13	0052	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	335887004	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005  
Matrix: Ground Water  
Collect Date: 15-OCT-13 11:08  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.98	+/-22.0	35.7		pCi/L		RXF2	11/01/13	1135 1341420	1
Americium-241	U	9.41	+/-19.4	21.9		pCi/L					
Antimony-124	U	2.44	+/-12.2	25.4		pCi/L					
Antimony-125	U	0.209	+/-10.7	19.0		pCi/L					
Barium-133	U	-2.7	+/-5.89	8.66		pCi/L					
Barium-140	U	-9.49	+/-14.0	24.7		pCi/L					
Beryllium-7	U	-6.23	+/-39.3	72.3		pCi/L					
Bismuth-212	U	-60.8	+/-69.4	99.6		pCi/L					
Bismuth-214	U	-6.08	+/-13.0	18.1		pCi/L					
Cerium-139	U	-1.56	+/-3.08	5.46		pCi/L					
Cerium-141	U	2.90	+/-6.92	12.1		pCi/L					
Cerium-144	U	15.3	+/-16.2	36.1		pCi/L					
Cesium-134	U	-2.13	+/-3.91	6.76		pCi/L					
Cesium-136	U	-1.37	+/-13.3	25.1		pCi/L					
Cesium-137	U	-3.77	+/-5.91	8.13	10.0	pCi/L					
Chromium-51	U	4.51	+/-45.1	81.1		pCi/L					
Cobalt-56	U	0.358	+/-5.11	9.43		pCi/L					
Cobalt-57	U	2.20	+/-2.26	4.60		pCi/L					
Cobalt-58	U	2.38	+/-4.45	8.67		pCi/L					
Cobalt-60	U	-1.65	+/-5.73	10.3		pCi/L					
Europium-152	U	0.239	+/-11.6	20.6		pCi/L					
Europium-154	U	-14	+/-13.6	21.5		pCi/L					
Europium-155	U	6.87	+/-11.0	19.7		pCi/L					
Iridium-192	U	-4.85	+/-4.95	7.30		pCi/L					
Iron-59	U	5.10	+/-9.73	20.1		pCi/L					
Lead-210	U	149	+/-359	557		pCi/L					
Lead-212	U	-3.73	+/-8.77	13.9		pCi/L					
Lead-214	U	5.60	+/-15.6	15.5		pCi/L					
Manganese-54	U	1.08	+/-3.59	7.02		pCi/L					
Mercury-203	U	1.87	+/-4.58	8.41		pCi/L					
Neodymium-147	U	3.53	+/-77.3	144		pCi/L					
Neptunium-239	U	0.264	+/-28.8	49.5		pCi/L					
Niobium-94	U	0.888	+/-4.50	7.40		pCi/L					
Niobium-95	U	-2.58	+/-4.76	8.20		pCi/L					
Potassium-40	U	-31.9	+/-72.6	111		pCi/L					
Promethium-144	U	-1.75	+/-4.03	7.07		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.16	+/-4.70	8.58	pCi/L
Radium-228	U	2.98	+/-22.0	35.7	pCi/L
Ruthenium-106	U	-0.409	+/-34.7	64.7	pCi/L
Silver-110m	U	3.18	+/-3.75	7.10	pCi/L
Sodium-22	U	-5.04	+/-4.79	7.55	pCi/L
Thallium-208	U	-3.04	+/-5.85	8.99	pCi/L
Thorium-230	U	249	+/-1020	1640	pCi/L
Thorium-234	U	14.1	+/-199	202	pCi/L
Tin-113	U	-2.89	+/-5.88	9.95	pCi/L
Uranium-235	U	-17.3	+/-25.8	37.4	pCi/L
Uranium-238	U	14.1	+/-199	202	pCi/L
Yttrium-88	U	-0.712	+/-5.45	10.7	pCi/L
Zinc-65	U	-3.47	+/-10.6	19.1	pCi/L
Zirconium-95	U	8.80	+/-8.35	17.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.94	+/-2.78	4.79	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		140	+/-7.32	2.88	5.00	pCi/L					
Alpha	U	2.56	+/-2.99	4.97	5.00	pCi/L	JAOC	11/11/13	1704	1341307	3
Beta		137	+/-7.93	3.21	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.8	+/-137	234	300	pCi/L	MYM1	11/05/13	0108	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005

Project: WNUC00124  
Client ID: WNUC001

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 14	Project:	WNUC00124
Sample ID:	335887006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 14:05		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.30	+/-23.1	34.3		pCi/L		RXF2	11/01/13	1209 1341420	1
Americium-241	U	16.2	+/-20.8	39.1		pCi/L					
Antimony-124	U	11.4	+/-11.3	24.5		pCi/L					
Antimony-125	U	-1.07	+/-10.6	18.5		pCi/L					
Barium-133	U	-3.71	+/-5.24	7.55		pCi/L					
Barium-140	U	-0.0842	+/-13.1	24.7		pCi/L					
Beryllium-7	U	-3.02	+/-35.3	61.4		pCi/L					
Bismuth-212	U	-58.1	+/-69.5	95.0		pCi/L					
Bismuth-214	U	13.7	+/-12.1	14.2		pCi/L					
Cerium-139	U	-2.05	+/-3.68	5.38		pCi/L					
Cerium-141	U	3.41	+/-7.72	13.6		pCi/L					
Cerium-144	U	7.57	+/-23.8	41.8		pCi/L					
Cesium-134	U	-1.21	+/-4.90	8.55		pCi/L					
Cesium-136	U	-0.205	+/-13.9	25.6		pCi/L					
Cesium-137	U	3.52	+/-5.32	8.85	10.0	pCi/L					
Chromium-51	U	34.0	+/-46.8	86.7		pCi/L					
Cobalt-56	U	-1.22	+/-4.43	7.71		pCi/L					
Cobalt-57	U	2.21	+/-2.86	5.18		pCi/L					
Cobalt-58	U	-0.756	+/-4.52	7.97		pCi/L					
Cobalt-60	U	4.65	+/-4.37	9.12		pCi/L					
Europium-152	U	-12.8	+/-12.3	18.4		pCi/L					
Europium-154	U	0.384	+/-12.7	23.5		pCi/L					
Europium-155	U	1.20	+/-12.1	21.4		pCi/L					
Iridium-192	U	-2.41	+/-4.16	7.12		pCi/L					
Iron-59	U	-0.222	+/-10.6	19.5		pCi/L					
Lead-210	U	959	+/-1010	1070		pCi/L					
Lead-212	U	8.79	+/-9.08	14.1		pCi/L					
Lead-214	U	4.44	+/-16.3	17.5		pCi/L					
Manganese-54	U	-0.54	+/-4.16	7.34		pCi/L					
Mercury-203	U	0.605	+/-5.05	8.03		pCi/L					
Neodymium-147	U	-31.9	+/-77.5	137		pCi/L					
Neptunium-239	U	-6.34	+/-31.2	54.1		pCi/L					
Niobium-94	U	-2.6	+/-3.55	5.97		pCi/L					
Niobium-95	U	-4.19	+/-5.76	8.99		pCi/L					
Potassium-40	U	21.6	+/-86.7	76.2		pCi/L					
Promethium-144	U	1.60	+/-3.73	7.00		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 14 Project: WNUC00124  
Sample ID: 335887006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.864	+/-5.04	8.68	pCi/L
Radium-228	U	2.30	+/-23.1	34.3	pCi/L
Ruthenium-106	U	13.5	+/-35.4	66.3	pCi/L
Silver-110m	U	-3.21	+/-4.03	6.77	pCi/L
Sodium-22	U	0.0498	+/-4.48	8.26	pCi/L
Thallium-208	UI	0.00	+/-8.30	6.56	pCi/L
Thorium-230	U	-844	+/-1530	2400	pCi/L
Thorium-234	U	-185	+/-260	402	pCi/L
Tin-113	U	-1.94	+/-5.29	9.06	pCi/L
Uranium-235	U	-7.56	+/-28.2	43.6	pCi/L
Uranium-238	U	-185	+/-260	402	pCi/L
Yttrium-88	U	-5.13	+/-4.50	6.73	pCi/L
Zinc-65	U	3.67	+/-10.4	17.3	pCi/L
Zirconium-95	U	2.18	+/-8.25	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.972	+/-2.00	4.85	5.00	pCi/L	JAOC	11/06/13	2146	1341307	2
Beta		28.6	+/-4.10	3.09	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-62.6	+/-128	229	300	pCi/L	MYM1	11/05/13	0124	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	335887007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 13:21		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.38	+/-19.5	26.3		pCi/L		RXF2	11/01/13	1210 1341420	1
Americium-241	U	-3.12	+/-23.8	38.4		pCi/L					
Antimony-124	U	-6.53	+/-9.04	15.3		pCi/L					
Antimony-125	U	-0.612	+/-8.40	15.1		pCi/L					
Barium-133	U	-0.441	+/-4.39	7.88		pCi/L					
Barium-140	U	0.229	+/-10.1	19.7		pCi/L					
Beryllium-7	U	-4.32	+/-31.9	56.8		pCi/L					
Bismuth-212	U	29.5	+/-47.5	85.1		pCi/L					
Bismuth-214	U	-7.11	+/-8.42	13.2		pCi/L					
Cerium-139	U	3.59	+/-3.11	5.30		pCi/L					
Cerium-141	U	2.94	+/-7.01	11.3		pCi/L					
Cerium-144	U	6.47	+/-19.2	34.4		pCi/L					
Cesium-134	U	3.97	+/-3.30	6.70		pCi/L					
Cesium-136	U	9.42	+/-10.9	22.3		pCi/L					
Cesium-137	U	-0.527	+/-3.39	5.94	10.0	pCi/L					
Chromium-51	U	3.49	+/-36.8	67.7		pCi/L					
Cobalt-56	U	-2.27	+/-4.18	7.31		pCi/L					
Cobalt-57	U	0.0886	+/-2.42	4.29		pCi/L					
Cobalt-58	U	-1.45	+/-3.71	5.68		pCi/L					
Cobalt-60	U	-1.07	+/-3.71	6.88		pCi/L					
Europium-152	U	2.79	+/-9.11	17.0		pCi/L					
Europium-154	U	5.05	+/-9.84	19.7		pCi/L					
Europium-155	U	-0.555	+/-10.5	18.5		pCi/L					
Iridium-192	U	0.151	+/-3.20	5.88		pCi/L					
Iron-59	U	-2.73	+/-7.79	13.8		pCi/L					
Lead-210	U	205	+/-775	1350		pCi/L					
Lead-212	U	-0.208	+/-7.04	11.8		pCi/L					
Lead-214	U	-14.5	+/-9.43	13.6		pCi/L					
Manganese-54	U	-0.0884	+/-3.15	5.88		pCi/L					
Mercury-203	U	-2.96	+/-4.74	6.82		pCi/L					
Neodymium-147	U	24.3	+/-53.0	102		pCi/L					
Neptunium-239	U	-7.64	+/-27.4	42.4		pCi/L					
Niobium-94	U	1.82	+/-3.09	6.06		pCi/L					
Niobium-95	U	3.54	+/-6.44	6.89		pCi/L					
Potassium-40	U	15.2	+/-49.9	52.9		pCi/L					
Promethium-144	U	-8.83	+/-6.55	5.94		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	335887007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.05	+/-3.89	6.86	pCi/L
Radium-228	U	7.38	+/-19.5	26.3	pCi/L
Ruthenium-106	U	-36.4	+/-33.1	52.0	pCi/L
Silver-110m	U	1.99	+/-3.09	5.92	pCi/L
Sodium-22	U	1.73	+/-3.47	6.93	pCi/L
Thallium-208	U	-1.81	+/-4.29	6.83	pCi/L
Thorium-230	U	1480	+/-2220	2350	pCi/L
Thorium-234	U	-62.1	+/-239	392	pCi/L
Tin-113	U	-2.72	+/-4.28	7.36	pCi/L
Uranium-235	U	6.58	+/-25.7	36.2	pCi/L
Uranium-238	U	-62.1	+/-239	392	pCi/L
Yttrium-88	U	-1.14	+/-4.49	8.26	pCi/L
Zinc-65	U	-1.18	+/-11.7	12.0	pCi/L
Zirconium-95	U	-1.67	+/-6.57	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.365	+/-2.34	4.77	5.00	pCi/L	JAOC	11/06/13	2201	1341307	2
Beta		268	+/-12.3	3.33	5.00	pCi/L					
Alpha	U	-0.691	+/-2.56	4.90	5.00	pCi/L	JAOC	11/11/13	1650	1341307	3
Beta		256	+/-7.78	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	261	+/-147	238	300	pCi/L	MYM1	11/05/13	0141	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.5	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 335887007

Project: WNUC00124  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 335887008  
Matrix: Ground Water  
Collect Date: 14-OCT-13 14:20  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.37	+/-25.8	29.6		pCi/L		RXF2	11/01/13	1210 1341420	1
Americium-241	U	-20	+/-27.2	47.0		pCi/L					
Antimony-124	U	-12.4	+/-9.84	13.9		pCi/L					
Antimony-125	U	-9.6	+/-9.67	15.8		pCi/L					
Barium-133	U	7.52	+/-6.72	8.03		pCi/L					
Barium-140	U	9.86	+/-11.7	25.8		pCi/L					
Beryllium-7	U	-29.2	+/-34.3	56.5		pCi/L					
Bismuth-212	U	27.2	+/-43.0	88.1		pCi/L					
Bismuth-214	U	6.66	+/-11.2	16.5		pCi/L					
Cerium-139	U	0.430	+/-3.07	5.36		pCi/L					
Cerium-141	U	5.24	+/-7.81	11.8		pCi/L					
Cerium-144	U	-12.2	+/-20.3	34.1		pCi/L					
Cesium-134	U	2.34	+/-3.68	7.48		pCi/L					
Cesium-136	U	9.79	+/-7.86	25.9		pCi/L					
Cesium-137	U	3.77	+/-4.40	6.84	10.0	pCi/L					
Chromium-51	U	28.3	+/-38.3	68.6		pCi/L					
Cobalt-56	U	0.618	+/-3.93	7.53		pCi/L					
Cobalt-57	U	0.675	+/-2.59	4.63		pCi/L					
Cobalt-58	U	0.491	+/-3.81	7.30		pCi/L					
Cobalt-60	U	0.647	+/-4.46	7.77		pCi/L					
Europium-152	U	3.01	+/-10.9	20.0		pCi/L					
Europium-154	U	-8.66	+/-9.73	16.4		pCi/L					
Europium-155	U	3.56	+/-10.6	19.2		pCi/L					
Iridium-192	U	-0.382	+/-4.49	7.11		pCi/L					
Iron-59	U	8.48	+/-6.79	15.9		pCi/L					
Lead-210	U	411	+/-1220	2280		pCi/L					
Lead-212	U	2.59	+/-8.04	12.0		pCi/L					
Lead-214	U	5.88	+/-11.2	17.0		pCi/L					
Manganese-54	U	-0.00168	+/-3.67	6.86		pCi/L					
Mercury-203	U	4.29	+/-4.05	7.91		pCi/L					
Neodymium-147	U	21.0	+/-64.5	121		pCi/L					
Neptunium-239	U	-20.7	+/-27.8	46.5		pCi/L					
Niobium-94	U	3.12	+/-3.47	7.02		pCi/L					
Niobium-95	U	0.444	+/-4.03	6.81		pCi/L					
Potassium-40	U	9.45	+/-52.6	95.9		pCi/L					
Promethium-144	U	0.0607	+/-3.73	6.95		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 16	Project:	WNUC00124
Sample ID:	335887008	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.683	+/-4.38	8.02	pCi/L
Radium-228	U	5.37	+/-25.8	29.6	pCi/L
Ruthenium-106	U	2.95	+/-31.9	57.9	pCi/L
Silver-110m	U	-0.795	+/-3.63	5.80	pCi/L
Sodium-22	U	-3.32	+/-3.51	5.84	pCi/L
Thallium-208	U	0.798	+/-4.68	7.88	pCi/L
Thorium-230	U	-1000	+/-1760	2580	pCi/L
Thorium-234	U	-48.7	+/-271	431	pCi/L
Tin-113	U	-1.6	+/-4.94	8.68	pCi/L
Uranium-235	U	33.3	+/-23.6	34.2	pCi/L
Uranium-238	U	-48.7	+/-271	431	pCi/L
Yttrium-88	U	2.29	+/-3.37	8.09	pCi/L
Zinc-65	U	-3.08	+/-8.23	14.5	pCi/L
Zirconium-95	U	-1.52	+/-5.55	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.321	+/-2.37	4.67	5.00	pCi/L	JAOC	11/06/13	2147	1341307	2
Beta		16.1	+/-3.45	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-65.5	+/-127	228	300	pCi/L	MYM1	11/05/13	0157	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 17	Project:	WNUC00124
Sample ID:	335887009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 10:17		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.59	+/-18.2	35.1		pCi/L		RXF2	11/01/13	1211 1341420	1
Americium-241	U	-13.7	+/-24.2	36.8		pCi/L					
Antimony-124	U	-2.85	+/-11.8	22.1		pCi/L					
Antimony-125	U	-3.32	+/-11.5	19.6		pCi/L					
Barium-133	U	2.81	+/-7.65	9.08		pCi/L					
Barium-140	U	-6.49	+/-12.0	21.5		pCi/L					
Beryllium-7	U	-5.68	+/-38.6	70.4		pCi/L					
Bismuth-212	U	-7.21	+/-59.9	107		pCi/L					
Bismuth-214	U	6.91	+/-14.0	12.3		pCi/L					
Cerium-139	U	-0.715	+/-3.67	6.56		pCi/L					
Cerium-141	U	1.17	+/-9.45	14.3		pCi/L					
Cerium-144	U	-11.9	+/-25.9	43.0		pCi/L					
Cesium-134	U	2.64	+/-4.97	7.23		pCi/L					
Cesium-136	U	0.533	+/-12.0	22.8		pCi/L					
Cesium-137	U	-0.162	+/-4.41	7.99	10.0	pCi/L					
Chromium-51	U	-13.6	+/-51.8	89.7		pCi/L					
Cobalt-56	U	-2.23	+/-4.17	7.09		pCi/L					
Cobalt-57	U	0.524	+/-3.32	5.72		pCi/L					
Cobalt-58	U	-0.276	+/-4.36	7.89		pCi/L					
Cobalt-60	U	1.62	+/-4.20	7.61		pCi/L					
Europium-152	U	6.67	+/-16.6	23.2		pCi/L					
Europium-154	U	4.43	+/-13.0	25.5		pCi/L					
Europium-155	U	-2.78	+/-12.8	21.8		pCi/L					
Iridium-192	U	-2.24	+/-4.79	8.17		pCi/L					
Iron-59	U	0.371	+/-9.27	17.6		pCi/L					
Lead-210	U	-693	+/-660	1110		pCi/L					
Lead-212	U	11.9	+/-11.9	12.5		pCi/L					
Lead-214	U	10.3	+/-13.4	18.4		pCi/L					
Manganese-54	U	2.02	+/-5.27	8.61		pCi/L					
Mercury-203	U	-1.76	+/-5.01	8.68		pCi/L					
Neodymium-147	U	62.4	+/-78.1	152		pCi/L					
Neptunium-239	U	27.7	+/-34.4	61.3		pCi/L					
Niobium-94	U	-4.0	+/-3.74	6.03		pCi/L					
Niobium-95	U	2.30	+/-6.51	7.79		pCi/L					
Potassium-40	U	17.0	+/-52.2	83.8		pCi/L					
Promethium-144	U	3.68	+/-4.51	8.66		pCi/L					



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 17 Project: WNUC00124  
Sample ID: 335887009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.650	+/-5.49	9.65	pCi/L
Radium-228	U	7.59	+/-18.2	35.1	pCi/L
Ruthenium-106	U	14.6	+/-36.3	68.8	pCi/L
Silver-110m	U	0.323	+/-3.69	6.84	pCi/L
Sodium-22	U	1.42	+/-4.58	8.94	pCi/L
Thallium-208	U	-0.301	+/-5.16	8.54	pCi/L
Thorium-230	U	-1660	+/-1650	2550	pCi/L
Thorium-234	U	87.8	+/-234	357	pCi/L
Tin-113	U	-2.41	+/-5.56	9.42	pCi/L
Uranium-235	U	17.8	+/-39.1	45.7	pCi/L
Uranium-238	U	87.8	+/-234	357	pCi/L
Yttrium-88	U	4.62	+/-4.32	10.1	pCi/L
Zinc-65	U	3.89	+/-9.76	17.0	pCi/L
Zirconium-95	U	-1.11	+/-7.06	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.8	+/-6.07	4.55	5.00	pCi/L	JAOC	11/06/13	2146	1341307	2
Beta	372	+/-14.4	3.56	5.00	pCi/L					
Alpha	U 3.19	+/-3.35	4.98	5.00	pCi/L	JAOC	11/12/13	1523	1341307	3
Beta	374	+/-12.2	2.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	471	+/-152	231	300	pCi/L	MYM1	11/05/13	0213	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 335887009

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	335887010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 09:46		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		3.81	+/-1.03	0.456	1.00	pCi/L		HAKB	11/18/13	1046 1346857	1
Uranium-235/236	U	0.407	+/-0.414	0.410	1.00	pCi/L					
Uranium-238		1.99	+/-0.744	0.332	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.03	+/-22.1	24.0		pCi/L		RXF2	11/01/13	1211 1341420	2
Americium-241	U	19.8	+/-27.7	45.3		pCi/L					
Antimony-124	U	-1.53	+/-10.8	20.6		pCi/L					
Antimony-125	U	-1.91	+/-9.56	17.3		pCi/L					
Barium-133	U	-0.26	+/-5.51	8.34		pCi/L					
Barium-140	U	3.84	+/-12.1	22.8		pCi/L					
Beryllium-7	U	-6.12	+/-38.5	69.3		pCi/L					
Bismuth-212	U	42.8	+/-73.4	99.8		pCi/L					
Bismuth-214	U	5.66	+/-14.2	16.2		pCi/L					
Cerium-139	U	0.0846	+/-3.70	6.60		pCi/L					
Cerium-141	U	-0.183	+/-7.77	13.5		pCi/L					
Cerium-144	U	-0.0863	+/-23.5	42.2		pCi/L					
Cesium-134	U	0.882	+/-4.33	7.79		pCi/L					
Cesium-136	U	-10.4	+/-12.4	20.7		pCi/L					
Cesium-137	U	-1.21	+/-3.95	6.93	10.0	pCi/L					
Chromium-51	U	20.2	+/-49.4	88.5		pCi/L					
Cobalt-56	U	0.985	+/-5.09	9.57		pCi/L					
Cobalt-57	U	0.679	+/-2.99	5.46		pCi/L					
Cobalt-58	U	-1.89	+/-4.28	7.29		pCi/L					
Cobalt-60	U	-0.851	+/-3.95	7.19		pCi/L					
Europium-152	U	-0.573	+/-12.6	19.1		pCi/L					
Europium-154	U	0.251	+/-14.7	23.5		pCi/L					
Europium-155	U	-3.17	+/-13.3	22.2		pCi/L					
Iridium-192	U	-1.32	+/-4.59	7.82		pCi/L					
Iron-59	U	-0.989	+/-9.31	17.2		pCi/L					
Lead-210	U	-402	+/-870	1490		pCi/L					
Lead-212	U	-1.27	+/-9.41	15.5		pCi/L					
Lead-214	U	2.09	+/-12.1	16.3		pCi/L					
Manganese-54	U	-2.87	+/-3.87	6.68		pCi/L					
Mercury-203	U	1.87	+/-4.92	8.80		pCi/L					
Neodymium-147	U	-10.4	+/-77.7	129		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	335887010	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	-22.7	+/-31.3	54.6	pCi/L
Niobium-94	U	6.04	+/-4.63	7.12	pCi/L
Niobium-95	U	-5.64	+/-4.45	6.78	pCi/L
Potassium-40	U	-0.886	+/-61.0	111	pCi/L
Promethium-144	U	2.80	+/-4.68	7.79	pCi/L
Promethium-146	U	2.73	+/-4.63	8.87	pCi/L
Radium-228	U	3.03	+/-22.1	24.0	pCi/L
Ruthenium-106	U	-7.37	+/-33.2	58.9	pCi/L
Silver-110m	U	1.57	+/-3.67	6.95	pCi/L
Sodium-22	U	0.224	+/-5.23	8.37	pCi/L
Thallium-208	U	3.75	+/-6.96	7.07	pCi/L
Thorium-230	U	2080	+/-1690	2870	pCi/L
Thorium-234	U	304	+/-362	332	pCi/L
Tin-113	U	1.50	+/-5.04	9.44	pCi/L
Uranium-235	U	-1.78	+/-29.8	43.0	pCi/L
Uranium-238	U	304	+/-362	332	pCi/L
Yttrium-88	U	-3.67	+/-4.54	7.45	pCi/L
Zinc-65	U	2.70	+/-8.89	15.7	pCi/L
Zirconium-95	U	-3.91	+/-7.82	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.6	+/-7.29	11.0	5.00	pCi/L	JAOC	11/06/13	2003	1341307	3
Beta	235	+/-8.75	5.26	5.00	pCi/L					
Alpha	19.9	+/-9.52	14.8	5.00	pCi/L	JAOC	11/12/13	1838	1341307	4
Beta	248	+/-9.08	5.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	226	+/-143	233	300	pCi/L	MYM1	11/05/13	0229	1341885	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 335887010  
Project: WNUC00124  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			81.0	(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).

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	335887011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 10:36		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-13.7	25.0		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	13.4	+/-19.7	37.7		pCi/L					
Antimony-124	U	0.136	+/-8.17	16.2		pCi/L					
Antimony-125	U	-1.49	+/-8.39	15.0		pCi/L					
Barium-133	U	-3.86	+/-4.64	6.81		pCi/L					
Barium-140	U	5.19	+/-9.04	19.1		pCi/L					
Beryllium-7	U	3.14	+/-28.8	52.9		pCi/L					
Bismuth-212	U	-39.3	+/-51.1	81.1		pCi/L					
Bismuth-214	U	6.29	+/-11.7	15.4		pCi/L					
Cerium-139	U	-1.73	+/-2.97	5.02		pCi/L					
Cerium-141	U	2.96	+/-9.10	10.3		pCi/L					
Cerium-144	U	8.39	+/-19.2	34.9		pCi/L					
Cesium-134	U	0.446	+/-3.92	6.53		pCi/L					
Cesium-136	U	0.109	+/-9.81	18.3		pCi/L					
Cesium-137	U	0.585	+/-3.39	6.17	10.0	pCi/L					
Chromium-51	U	35.7	+/-37.1	72.0		pCi/L					
Cobalt-56	U	3.20	+/-3.91	7.81		pCi/L					
Cobalt-57	U	-0.0871	+/-2.46	4.37		pCi/L					
Cobalt-58	U	0.817	+/-3.58	6.86		pCi/L					
Cobalt-60	U	-0.774	+/-3.02	5.72		pCi/L					
Europium-152	U	-2.0	+/-8.66	15.6		pCi/L					
Europium-154	U	-2.36	+/-10.5	19.3		pCi/L					
Europium-155	U	9.46	+/-10.7	20.0		pCi/L					
Iridium-192	U	-1.31	+/-3.22	5.76		pCi/L					
Iron-59	U	-3.41	+/-8.77	13.0		pCi/L					
Lead-210	U	-314	+/-843	1260		pCi/L					
Lead-212	U	-0.589	+/-7.48	11.2		pCi/L					
Lead-214	U	4.77	+/-11.5	14.9		pCi/L					
Manganese-54	U	-1.09	+/-3.26	5.87		pCi/L					
Mercury-203	U	-2.78	+/-3.60	5.80		pCi/L					
Neodymium-147	U	-6.94	+/-56.8	101		pCi/L					
Neptunium-239	U	3.17	+/-25.9	46.6		pCi/L					
Niobium-94	U	-1.72	+/-3.23	5.74		pCi/L					
Niobium-95	U	0.960	+/-3.34	6.48		pCi/L					
Potassium-40	U	-4.39	+/-49.0	87.7		pCi/L					
Promethium-144	U	-1.91	+/-3.42	6.06		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 20

Sample ID: 335887011

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.189	+/-4.43	7.03	pCi/L
Radium-228	U	12.9	+/-13.7	25.0	pCi/L
Ruthenium-106	U	0.238	+/-30.0	53.6	pCi/L
Silver-110m	U	-0.782	+/-2.72	4.75	pCi/L
Sodium-22	U	-0.541	+/-3.66	6.82	pCi/L
Thallium-208	U	1.50	+/-4.56	5.32	pCi/L
Thorium-230	U	335	+/-1700	1970	pCi/L
Thorium-234	U	-49.1	+/-208	353	pCi/L
Tin-113	U	5.60	+/-4.42	8.74	pCi/L
Uranium-235	U	9.24	+/-28.4	32.0	pCi/L
Uranium-238	U	-49.1	+/-208	353	pCi/L
Yttrium-88	U	-1.78	+/-4.45	7.95	pCi/L
Zinc-65	U	0.876	+/-7.40	13.9	pCi/L
Zirconium-95	U	3.24	+/-6.15	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.438	+/-2.45	4.82	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	U	2.27	+/-2.19	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-45.8	+/-129	230	300	pCi/L	MYM1	11/05/13	0245	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 22  
Sample ID: 335887012  
Matrix: Ground Water  
Collect Date: 15-OCT-13 09:21  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.62	+/-15.3	25.9		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	-8.98	+/-16.7	25.4		pCi/L					
Antimony-124	U	-4.01	+/-9.33	16.5		pCi/L					
Antimony-125	U	-3.35	+/-9.06	15.6		pCi/L					
Barium-133	U	-3.01	+/-4.93	7.22		pCi/L					
Barium-140	U	4.41	+/-9.23	17.4		pCi/L					
Beryllium-7	U	7.27	+/-33.2	59.8		pCi/L					
Bismuth-212	U	37.1	+/-53.1	94.4		pCi/L					
Bismuth-214	U	14.0	+/-12.9	16.7		pCi/L					
Cerium-139	U	-3.29	+/-3.14	5.01		pCi/L					
Cerium-141	U	2.95	+/-6.73	11.8		pCi/L					
Cerium-144	U	15.0	+/-19.6	35.1		pCi/L					
Cesium-134	U	-0.503	+/-3.88	6.38		pCi/L					
Cesium-136	U	-6.28	+/-11.3	19.2		pCi/L					
Cesium-137	U	0.950	+/-7.29	6.12	10.0	pCi/L					
Chromium-51	U	-18.3	+/-37.7	65.2		pCi/L					
Cobalt-56	U	-1.15	+/-3.92	6.95		pCi/L					
Cobalt-57	U	0.013	+/-2.50	4.33		pCi/L					
Cobalt-58	U	1.61	+/-3.74	7.16		pCi/L					
Cobalt-60	U	1.42	+/-3.62	7.23		pCi/L					
Europium-152	U	-9.21	+/-13.1	16.4		pCi/L					
Europium-154	U	7.92	+/-9.36	19.9		pCi/L					
Europium-155	U	3.61	+/-10.0	17.8		pCi/L					
Iridium-192	U	-0.367	+/-3.36	5.98		pCi/L					
Iron-59	U	0.790	+/-8.72	16.0		pCi/L					
Lead-210	U	-101	+/-430	640		pCi/L					
Lead-212	U	3.92	+/-8.62	10.0		pCi/L					
Lead-214	U	-4.26	+/-9.12	13.8		pCi/L					
Manganese-54	U	2.91	+/-3.60	6.11		pCi/L					
Mercury-203	U	-0.812	+/-3.89	6.90		pCi/L					
Neodymium-147	U	-28.4	+/-56.6	95.2		pCi/L					
Neptunium-239	U	-1.54	+/-28.5	46.1		pCi/L					
Niobium-94	U	-2.36	+/-2.99	5.10		pCi/L					
Niobium-95	U	2.98	+/-3.36	6.81		pCi/L					
Potassium-40	U	-26.3	+/-51.3	87.6		pCi/L					
Promethium-144	U	0.159	+/-3.21	5.94		pCi/L					



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	335887012	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.31	+/-5.57	6.87	pCi/L
Radium-228	U	-2.62	+/-15.3	25.9	pCi/L
Ruthenium-106	U	-27.4	+/-37.2	54.3	pCi/L
Silver-110m	U	-4.59	+/-4.03	5.48	pCi/L
Sodium-22	U	2.76	+/-3.30	7.01	pCi/L
Thallium-208	U	-0.822	+/-3.91	6.92	pCi/L
Thorium-230	U	-426	+/-1170	1820	pCi/L
Thorium-234	U	-128	+/-155	264	pCi/L
Tin-113	U	0.936	+/-4.50	8.12	pCi/L
Uranium-235	U	7.01	+/-23.8	36.9	pCi/L
Uranium-238	U	-128	+/-155	264	pCi/L
Yttrium-88	U	-1.02	+/-3.37	6.21	pCi/L
Zinc-65	U	-5.7	+/-9.63	13.1	pCi/L
Zirconium-95	U	3.76	+/-6.34	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		8.13	+/-5.03	7.91	5.00	pCi/L	JAOC	11/06/13	2003	1341307	2
Beta		91.2	+/-4.33	2.81	5.00	pCi/L					
Alpha	U	7.46	+/-5.36	8.44	5.00	pCi/L	JAOC	11/11/13	1930	1341307	3
Beta		87.2	+/-4.71	4.49	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	156	+/-139	231	300	pCi/L	MYM1	11/05/13	0409	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	335887012	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 335887013  
Matrix: Ground Water  
Collect Date: 14-OCT-13 13:39  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.45	+/-17.3	22.3		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	-3.13	+/-15.6	25.3		pCi/L					
Antimony-124	U	-2.7	+/-9.74	17.9		pCi/L					
Antimony-125	U	-1.18	+/-8.93	15.9		pCi/L					
Barium-133	U	-0.584	+/-4.22	7.02		pCi/L					
Barium-140	U	-6.58	+/-11.5	20.0		pCi/L					
Beryllium-7	U	-6.64	+/-29.4	52.0		pCi/L					
Bismuth-212	U	7.38	+/-52.1	86.4		pCi/L					
Bismuth-214	U	4.00	+/-12.0	14.5		pCi/L					
Cerium-139	U	0.457	+/-2.92	5.14		pCi/L					
Cerium-141	U	6.89	+/-12.1	10.4		pCi/L					
Cerium-144	U	-12.4	+/-22.4	33.8		pCi/L					
Cesium-134	U	-0.54	+/-3.52	6.12		pCi/L					
Cesium-136	U	-11.8	+/-13.3	17.6		pCi/L					
Cesium-137	U	-2.24	+/-3.49	5.74	10.0	pCi/L					
Chromium-51	U	21.1	+/-38.5	72.6		pCi/L					
Cobalt-56	U	-3.61	+/-4.60	6.50		pCi/L					
Cobalt-57	U	0.412	+/-2.49	4.43		pCi/L					
Cobalt-58	U	1.15	+/-3.65	7.02		pCi/L					
Cobalt-60	U	3.81	+/-3.81	8.13		pCi/L					
Europium-152	U	-0.768	+/-8.92	16.1		pCi/L					
Europium-154	U	10.1	+/-9.81	19.4		pCi/L					
Europium-155	U	-4.94	+/-9.71	16.8		pCi/L					
Iridium-192	U	-0.0847	+/-3.46	6.29		pCi/L					
Iron-59	U	-4.53	+/-8.28	13.2		pCi/L					
Lead-210	U	-178	+/-469	683		pCi/L					
Lead-212	U	5.46	+/-7.68	11.6		pCi/L					
Lead-214	U	0.933	+/-10.4	13.9		pCi/L					
Manganese-54	U	-0.131	+/-3.22	5.97		pCi/L					
Mercury-203	U	1.09	+/-3.64	6.79		pCi/L					
Neodymium-147	U	-4.22	+/-66.9	119		pCi/L					
Neptunium-239	U	-3.61	+/-25.2	44.3		pCi/L					
Niobium-94	U	0.542	+/-3.78	6.21		pCi/L					
Niobium-95	U	0.534	+/-3.61	6.85		pCi/L					
Potassium-40	U	-23.5	+/-48.5	80.9		pCi/L					
Promethium-144	U	4.53	+/-3.52	7.16		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 335887013

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.93	+/-4.26	7.52	pCi/L
Radium-228	U	2.45	+/-17.3	22.3	pCi/L
Ruthenium-106	U	-26.4	+/-29.3	47.0	pCi/L
Silver-110m	U	-0.891	+/-3.10	5.34	pCi/L
Sodium-22	U	3.57	+/-3.47	5.18	pCi/L
Thallium-208	U	-4.47	+/-4.65	6.10	pCi/L
Thorium-230	U	1620	+/-1250	1650	pCi/L
Thorium-234	U	44.2	+/-204	260	pCi/L
Tin-113	U	0.592	+/-4.14	7.59	pCi/L
Uranium-235	U	20.7	+/-36.2	35.7	pCi/L
Uranium-238	U	44.2	+/-204	260	pCi/L
Yttrium-88	U	-2.81	+/-4.65	7.95	pCi/L
Zinc-65	U	1.98	+/-7.34	14.0	pCi/L
Zirconium-95	U	0.105	+/-6.62	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.92	+/-3.60	4.82	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	5.78	+/-2.23	2.98	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-33.8	+/-136	241	300	pCi/L	MYM1	11/05/13	0425	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 24	Project:	WNUC00124
Sample ID:	335887014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 11:16		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.7	+/-31.2	44.0		pCi/L		RXF2	11/01/13	1213 1341420	1
Americium-241	U	-0.263	+/-6.05	10.1		pCi/L					
Antimony-124	U	0.888	+/-12.9	25.5		pCi/L					
Antimony-125	U	-5.31	+/-11.4	17.2		pCi/L					
Barium-133	U	-5.01	+/-5.37	8.98		pCi/L					
Barium-140	U	6.74	+/-13.7	28.7		pCi/L					
Beryllium-7	U	25.1	+/-35.5	69.4		pCi/L					
Bismuth-212	U	-27.9	+/-68.4	111		pCi/L					
Bismuth-214	U	13.8	+/-14.7	14.4		pCi/L					
Cerium-139	U	-1.14	+/-3.32	5.09		pCi/L					
Cerium-141	U	1.09	+/-7.26	11.4		pCi/L					
Cerium-144	U	3.18	+/-19.1	34.3		pCi/L					
Cesium-134	U	1.46	+/-4.36	8.57		pCi/L					
Cesium-136	U	-3.84	+/-15.6	27.3		pCi/L					
Cesium-137	U	-0.305	+/-5.16	9.08	10.0	pCi/L					
Chromium-51	U	6.67	+/-42.7	79.4		pCi/L					
Cobalt-56	U	-1.42	+/-5.44	9.83		pCi/L					
Cobalt-57	U	0.296	+/-2.47	4.01		pCi/L					
Cobalt-58	U	-1.82	+/-5.09	9.17		pCi/L					
Cobalt-60	U	1.93	+/-5.25	10.5		pCi/L					
Europium-152	U	10.3	+/-11.7	20.6		pCi/L					
Europium-154	U	11.4	+/-19.9	27.1		pCi/L					
Europium-155	U	2.77	+/-8.41	15.5		pCi/L					
Iridium-192	U	-0.065	+/-3.63	6.71		pCi/L					
Iron-59	U	2.25	+/-11.7	22.0		pCi/L					
Lead-210	U	31.1	+/-108	103		pCi/L					
Lead-212	U	3.44	+/-10.8	14.0		pCi/L					
Lead-214	U	-7.93	+/-10.4	16.5		pCi/L					
Manganese-54	U	1.37	+/-3.95	7.77		pCi/L					
Mercury-203	U	-1.42	+/-4.60	7.71		pCi/L					
Neodymium-147	U	-48.5	+/-77.4	131		pCi/L					
Neptunium-239	U	-4.87	+/-23.0	40.9		pCi/L					
Niobium-94	U	0.203	+/-5.33	8.24		pCi/L					
Niobium-95	U	3.50	+/-5.02	10.0		pCi/L					
Potassium-40	U	57.0	+/-49.2	109		pCi/L					
Promethium-144	U	-1.64	+/-4.47	7.62		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 24 Project: WNUC00124  
Sample ID: 335887014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.03	+/-4.77	8.86	pCi/L
Radium-228	U	17.7	+/-31.2	44.0	pCi/L
Ruthenium-106	U	12.0	+/-38.0	70.7	pCi/L
Silver-110m	U	-3.39	+/-5.04	8.32	pCi/L
Sodium-22	U	6.11	+/-5.58	9.54	pCi/L
Thallium-208	U	-2.95	+/-6.47	9.59	pCi/L
Thorium-230	U	-707	+/-606	931	pCi/L
Thorium-234	U	-81	+/-83.4	132	pCi/L
Tin-113	U	-0.221	+/-4.68	8.58	pCi/L
Uranium-235	U	-18.9	+/-22.2	33.0	pCi/L
Uranium-238	U	-81	+/-83.4	132	pCi/L
Yttrium-88	U	-2.55	+/-6.94	12.8	pCi/L
Zinc-65	U	4.47	+/-9.30	18.5	pCi/L
Zirconium-95	U	2.56	+/-8.13	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.88	+/-3.30	4.66	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	U	2.34	+/-2.41	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-13.5	+/-134	236	300	pCi/L	MYM1	11/05/13	0441	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 26	Project:	WNUC00124
Sample ID:	335887015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 10:23		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		32.8	+/-20.1	20.6		pCi/L		RXF2	11/01/13	1214 1341420	1
Americium-241	U	-3.51	+/-13.1	19.6		pCi/L					
Antimony-124	U	-3.78	+/-8.28	14.7		pCi/L					
Antimony-125	U	2.34	+/-8.16	14.7		pCi/L					
Barium-133	U	-5.14	+/-4.01	6.34		pCi/L					
Barium-140	U	-5.16	+/-9.21	16.1		pCi/L					
Beryllium-7	U	7.89	+/-28.4	53.8		pCi/L					
Bismuth-212	U	-42.7	+/-47.7	69.9		pCi/L					
Bismuth-214	U	-3.14	+/-8.35	12.7		pCi/L					
Cerium-139	U	1.08	+/-2.68	4.89		pCi/L					
Cerium-141	U	5.15	+/-8.40	8.97		pCi/L					
Cerium-144	U	-1.33	+/-17.7	31.7		pCi/L					
Cesium-134	U	-2.1	+/-3.52	6.03		pCi/L					
Cesium-136	U	1.73	+/-10.2	19.1		pCi/L					
Cesium-137	U	0.955	+/-3.06	5.82	10.0	pCi/L					
Chromium-51	U	-23.7	+/-39.3	66.2		pCi/L					
Cobalt-56	U	0.0624	+/-3.65	6.50		pCi/L					
Cobalt-57	U	0.856	+/-2.12	3.90		pCi/L					
Cobalt-58	U	-1.18	+/-3.86	6.80		pCi/L					
Cobalt-60	U	-1.48	+/-3.09	5.53		pCi/L					
Europium-152	U	0.610	+/-8.36	14.8		pCi/L					
Europium-154	U	-0.23	+/-8.78	16.8		pCi/L					
Europium-155	U	-3.42	+/-10.2	16.1		pCi/L					
Iridium-192	U	5.97	+/-3.42	6.69		pCi/L					
Iron-59	U	-0.28	+/-7.55	13.7		pCi/L					
Lead-210	U	126	+/-343	366		pCi/L					
Lead-212	U	4.12	+/-7.01	10.1		pCi/L					
Lead-214	U	7.85	+/-8.54	14.3		pCi/L					
Manganese-54	U	0.173	+/-3.65	5.80		pCi/L					
Mercury-203	U	0.301	+/-3.44	6.12		pCi/L					
Neodymium-147	U	-17.7	+/-55.6	100		pCi/L					
Neptunium-239	U	1.55	+/-22.7	41.2		pCi/L					
Niobium-94	U	-1.7	+/-2.81	4.84		pCi/L					
Niobium-95	U	0.0512	+/-3.31	6.10		pCi/L					
Potassium-40	U	53.9	+/-46.4	65.7		pCi/L					
Promethium-144	U	2.27	+/-3.17	6.13		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 26

Sample ID: 335887015

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.53	+/-4.00	6.75	pCi/L
Radium-228		32.8	+/-20.1	20.6	pCi/L
Ruthenium-106	U	-16.3	+/-25.7	44.5	pCi/L
Silver-110m	U	-0.127	+/-3.04	5.57	pCi/L
Sodium-22	U	-0.623	+/-3.17	5.92	pCi/L
Thallium-208	U	-6.53	+/-4.10	6.26	pCi/L
Thorium-230	U	627	+/-1000	1510	pCi/L
Thorium-234	U	66.2	+/-145	177	pCi/L
Tin-113	U	0.0618	+/-3.80	6.73	pCi/L
Uranium-235	U	15.4	+/-25.1	33.2	pCi/L
Uranium-238	U	66.2	+/-145	177	pCi/L
Yttrium-88	U	0.134	+/-3.54	6.82	pCi/L
Zinc-65	U	3.59	+/-7.08	12.4	pCi/L
Zirconium-95	U	6.79	+/-5.84	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.86	+/-2.68	4.63	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta		13.5	+/-3.41	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	24.1	+/-124	216	300	pCi/L	MYM1	11/06/13	0031	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 27	Project:	WNUC00124
Sample ID:	335887016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 10:15		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.0994	+/-17.5	27.1		pCi/L		RXF2	11/01/13	1214 1341420	1
Americium-241	U	-8.49	+/-19.2	28.9		pCi/L					
Antimony-124	U	0.768	+/-7.28	14.7		pCi/L					
Antimony-125	U	3.89	+/-8.22	15.2		pCi/L					
Barium-133	U	1.77	+/-4.35	7.09		pCi/L					
Barium-140	U	3.85	+/-8.35	16.7		pCi/L					
Beryllium-7	U	5.41	+/-31.9	57.3		pCi/L					
Bismuth-212	U	-48.3	+/-55.0	76.3		pCi/L					
Bismuth-214	U	0.772	+/-15.3	11.8		pCi/L					
Cerium-139	U	0.684	+/-3.05	5.21		pCi/L					
Cerium-141	U	5.29	+/-6.80	11.9		pCi/L					
Cerium-144	U	-3.94	+/-19.9	33.5		pCi/L					
Cesium-134	U	-0.283	+/-3.27	6.06		pCi/L					
Cesium-136	U	0.609	+/-9.25	17.3		pCi/L					
Cesium-137	U	1.67	+/-3.38	6.23	10.0	pCi/L					
Chromium-51	U	24.0	+/-37.3	69.1		pCi/L					
Cobalt-56	U	0.732	+/-3.57	6.73		pCi/L					
Cobalt-57	U	2.52	+/-2.67	4.75		pCi/L					
Cobalt-58	U	2.23	+/-3.17	6.32		pCi/L					
Cobalt-60	U	-0.18	+/-3.04	5.66		pCi/L					
Europium-152	U	2.34	+/-9.07	16.5		pCi/L					
Europium-154	U	-1.28	+/-9.60	17.5		pCi/L					
Europium-155	U	-5.96	+/-10.7	17.8		pCi/L					
Iridium-192	U	-1.38	+/-3.50	6.11		pCi/L					
Iron-59	U	3.76	+/-7.22	12.9		pCi/L					
Lead-210	U	558	+/-711	701		pCi/L					
Lead-212	U	-0.83	+/-7.48	11.3		pCi/L					
Lead-214	U	2.00	+/-11.5	13.6		pCi/L					
Manganese-54	U	-1.19	+/-3.73	5.76		pCi/L					
Mercury-203	U	-1.07	+/-3.58	6.31		pCi/L					
Neodymium-147	U	24.4	+/-54.0	99.8		pCi/L					
Neptunium-239	U	17.2	+/-27.0	47.5		pCi/L					
Niobium-94	U	-0.0204	+/-3.47	5.32		pCi/L					
Niobium-95	U	2.07	+/-3.87	7.04		pCi/L					
Potassium-40	U	7.28	+/-48.2	92.8		pCi/L					
Promethium-144	U	0.413	+/-3.60	5.59		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 27 Project: WNUC00124  
Sample ID: 335887016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.924	+/-3.99	6.74	pCi/L
Radium-228	U	-0.0994	+/-17.5	27.1	pCi/L
Ruthenium-106	UI	0.00	+/-55.9	49.1	pCi/L
Silver-110m	U	-3.18	+/-2.98	4.69	pCi/L
Sodium-22	U	-0.501	+/-3.38	6.15	pCi/L
Thallium-208	U	-2.01	+/-4.49	7.03	pCi/L
Thorium-230	U	-199	+/-1400	1990	pCi/L
Thorium-234	U	12.9	+/-247	293	pCi/L
Tin-113	U	-3.35	+/-3.95	6.61	pCi/L
Uranium-235	U	-36.6	+/-24.9	35.3	pCi/L
Uranium-238	U	12.9	+/-247	293	pCi/L
Yttrium-88	U	2.30	+/-3.67	7.26	pCi/L
Zinc-65	U	-3.46	+/-7.70	10.7	pCi/L
Zirconium-95	U	-0.206	+/-6.28	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.351	+/-2.49	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		12.5	+/-2.77	3.29	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-106	+/-117	216	300	pCi/L	MYM1	11/06/13	0047	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	335887017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 10:44		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		8.67	+/-1.49	0.429	1.00	pCi/L		HAKB	11/18/13	1046 1346857	1
Uranium-235/236		0.464	+/-0.421	0.386	1.00	pCi/L					
Uranium-238		2.28	+/-0.767	0.196	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.7	+/-28.9	23.7		pCi/L		RXF2	11/01/13	1312 1341420	2
Americium-241	U	8.10	+/-21.1	34.3		pCi/L					
Antimony-124	U	7.49	+/-9.24	20.2		pCi/L					
Antimony-125	U	-0.224	+/-11.5	20.6		pCi/L					
Barium-133	U	-0.769	+/-5.86	9.07		pCi/L					
Barium-140	U	7.35	+/-12.2	22.6		pCi/L					
Beryllium-7	U	25.4	+/-48.5	78.6		pCi/L					
Bismuth-212	U	21.0	+/-66.9	106		pCi/L					
Bismuth-214	U	5.92	+/-11.7	16.7		pCi/L					
Cerium-139	U	-2.26	+/-4.21	6.18		pCi/L					
Cerium-141	U	2.84	+/-10.8	14.1		pCi/L					
Cerium-144	U	4.67	+/-24.8	43.7		pCi/L					
Cesium-134	U	0.536	+/-4.90	8.48		pCi/L					
Cesium-136	U	0.524	+/-11.1	20.7		pCi/L					
Cesium-137	U	-0.293	+/-4.59	8.07	10.0	pCi/L					
Chromium-51	U	30.8	+/-49.6	91.9		pCi/L					
Cobalt-56	U	-0.446	+/-5.19	9.42		pCi/L					
Cobalt-57	U	-2.03	+/-3.25	5.54		pCi/L					
Cobalt-58	U	-3.91	+/-5.82	8.48		pCi/L					
Cobalt-60	U	-4.48	+/-4.99	6.44		pCi/L					
Europium-152	U	-7.65	+/-12.4	21.4		pCi/L					
Europium-154	U	12.6	+/-10.0	20.7		pCi/L					
Europium-155	U	-8.41	+/-12.8	21.8		pCi/L					
Iridium-192	U	0.410	+/-4.59	8.29		pCi/L					
Iron-59	U	9.45	+/-8.88	17.0		pCi/L					
Lead-210	U	-581	+/-604	895		pCi/L					
Lead-212	U	2.76	+/-9.81	13.9		pCi/L					
Lead-214	U	3.49	+/-13.5	17.5		pCi/L					
Manganese-54	U	-0.464	+/-4.39	7.98		pCi/L					
Mercury-203	U	0.323	+/-5.17	8.84		pCi/L					
Neodymium-147	U	-79.5	+/-76.1	125		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	335887017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	23.0	+/-33.0	59.7	pCi/L
Niobium-94	U	-0.335	+/-3.89	6.82	pCi/L
Niobium-95	U	0.750	+/-4.68	8.38	pCi/L
Potassium-40	U	46.0	+/-57.2	64.0	pCi/L
Promethium-144	U	1.35	+/-4.47	8.03	pCi/L
Promethium-146	U	3.29	+/-5.42	10.0	pCi/L
Radium-228	U	19.7	+/-28.9	23.7	pCi/L
Ruthenium-106	U	-3.05	+/-43.8	66.6	pCi/L
Silver-110m	U	0.440	+/-4.46	7.93	pCi/L
Sodium-22	U	5.47	+/-3.25	7.32	pCi/L
Thallium-208	U	5.26	+/-8.04	7.07	pCi/L
Thorium-230	U	437	+/-1650	2320	pCi/L
Thorium-234	U	58.8	+/-261	281	pCi/L
Tin-113	U	0.806	+/-5.80	10.5	pCi/L
Uranium-235	U	8.66	+/-33.1	44.9	pCi/L
Uranium-238	U	58.8	+/-261	281	pCi/L
Yttrium-88	U	-0.642	+/-4.04	7.72	pCi/L
Zinc-65	U	-3.33	+/-9.22	13.8	pCi/L
Zirconium-95	U	-2.35	+/-8.31	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	18.7	+/-4.36	5.17	5.00	pCi/L	JAOC	11/06/13	2019	1341309	3
Beta	33.5	+/-3.87	5.21	5.00	pCi/L					
Alpha	17.3	+/-5.63	8.17	5.00	pCi/L	JAOC	11/12/13	1831	1341309	4
Beta	27.9	+/-2.90	3.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	43.3	+/-130	226	300	pCi/L	MYM1	11/06/13	0104	1341886	5
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# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 28  
Sample ID: 335887017  
Project: WNUC00124  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			89.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	335887018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 08:47		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-19.0	27.3		pCi/L		RXF2	11/01/13	1312 1341420	1
Americium-241	U	9.52	+/-21.7	34.9		pCi/L					
Antimony-124	U	-2.99	+/-8.47	15.7		pCi/L					
Antimony-125	U	5.07	+/-8.76	16.7		pCi/L					
Barium-133	U	0.234	+/-4.62	7.10		pCi/L					
Barium-140	U	-6.76	+/-12.9	19.3		pCi/L					
Beryllium-7	U	34.8	+/-32.9	52.2		pCi/L					
Bismuth-212	U	26.9	+/-44.1	84.6		pCi/L					
Bismuth-214	U	11.9	+/-13.3	12.3		pCi/L					
Cerium-139	U	-1.15	+/-3.09	5.02		pCi/L					
Cerium-141	U	1.26	+/-8.83	11.4		pCi/L					
Cerium-144	U	-7.38	+/-19.1	33.8		pCi/L					
Cesium-134	U	0.270	+/-3.89	6.42		pCi/L					
Cesium-136	U	-0.467	+/-9.33	17.5		pCi/L					
Cesium-137	U	4.65	+/-5.81	5.46	10.0	pCi/L					
Chromium-51	U	29.5	+/-40.2	73.7		pCi/L					
Cobalt-56	U	-1.17	+/-4.57	7.07		pCi/L					
Cobalt-57	U	0.532	+/-2.68	4.58		pCi/L					
Cobalt-58	U	1.02	+/-4.04	6.81		pCi/L					
Cobalt-60	U	-0.551	+/-3.09	5.70		pCi/L					
Europium-152	U	13.6	+/-10.0	19.1		pCi/L					
Europium-154	U	1.25	+/-9.92	18.8		pCi/L					
Europium-155	U	0.743	+/-10.2	17.5		pCi/L					
Iridium-192	U	-2.9	+/-3.45	5.69		pCi/L					
Iron-59	U	-2.33	+/-7.33	13.3		pCi/L					
Lead-210	U	247	+/-1350	983		pCi/L					
Lead-212	U	0.176	+/-8.31	11.6		pCi/L					
Lead-214	U	1.39	+/-11.1	14.4		pCi/L					
Manganese-54	U	0.475	+/-3.00	5.53		pCi/L					
Mercury-203	U	2.92	+/-4.90	7.74		pCi/L					
Neodymium-147	U	49.7	+/-70.2	120		pCi/L					
Neptunium-239	U	12.2	+/-27.6	48.0		pCi/L					
Niobium-94	U	0.329	+/-3.29	5.96		pCi/L					
Niobium-95	U	-0.395	+/-4.30	6.35		pCi/L					
Potassium-40	U	4.56	+/-48.1	86.1		pCi/L					
Promethium-144	U	1.32	+/-3.33	6.18		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	335887018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.18	+/-3.83	7.20	pCi/L
Radium-228	UI	0.00	+/-19.0	27.3	pCi/L
Ruthenium-106	U	14.2	+/-27.9	53.3	pCi/L
Silver-110m	U	-0.086	+/-3.58	5.62	pCi/L
Sodium-22	U	1.06	+/-3.44	6.70	pCi/L
Thallium-208	U	-3.44	+/-4.99	6.53	pCi/L
Thorium-230	U	958	+/-1390	2250	pCi/L
Thorium-234	U	32.5	+/-251	296	pCi/L
Tin-113	U	0.431	+/-4.36	7.67	pCi/L
Uranium-235	U	3.83	+/-26.9	34.6	pCi/L
Uranium-238	U	32.5	+/-251	296	pCi/L
Yttrium-88	U	3.00	+/-3.75	8.26	pCi/L
Zinc-65	U	-0.138	+/-6.20	11.7	pCi/L
Zirconium-95	U	4.27	+/-6.18	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.94	+/-3.83	5.83	5.00	pCi/L	JAOC	11/06/13	2019	1341309	2
Beta	32.1	+/-2.84	2.87	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	76.9	+/-126	215	300	pCi/L	MYM1	11/06/13	0120	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.7	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 335887019  
Matrix: Ground Water  
Collect Date: 15-OCT-13 09:06  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		11.3	+/-1.58	0.418	1.00	pCi/L		HAKB	11/18/13	1046	1346857	1
Uranium-235/236	U	0.336	+/-0.371	0.490	1.00	pCi/L						
Uranium-238		3.28	+/-0.861	0.373	1.00	pCi/L						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	24.8	+/-18.2	33.9		pCi/L		RXF2	11/01/13	1706	1341420	2
Americium-241	U	-31.1	+/-29.3	48.1		pCi/L						
Antimony-124	U	5.63	+/-8.55	18.9		pCi/L						
Antimony-125	U	4.45	+/-8.76	16.4		pCi/L						
Barium-133	U	-3.02	+/-5.02	7.38		pCi/L						
Barium-140	U	1.89	+/-9.58	19.4		pCi/L						
Beryllium-7	U	23.0	+/-33.2	62.8		pCi/L						
Bismuth-212	U	-27.7	+/-47.7	83.9		pCi/L						
Bismuth-214	U	-12.4	+/-10.3	15.4		pCi/L						
Cerium-139	U	0.953	+/-3.76	5.75		pCi/L						
Cerium-141	U	-1.26	+/-8.54	13.1		pCi/L						
Cerium-144	U	-2.55	+/-23.5	39.7		pCi/L						
Cesium-134	U	-1.56	+/-3.29	5.85		pCi/L						
Cesium-136	U	-4.87	+/-10.4	18.2		pCi/L						
Cesium-137	U	0.0876	+/-3.36	6.31	10.0	pCi/L						
Chromium-51	U	-22	+/-40.5	69.9		pCi/L						
Cobalt-56	U	-2.3	+/-3.59	6.23		pCi/L						
Cobalt-57	U	0.908	+/-2.89	5.03		pCi/L						
Cobalt-58	U	-1.03	+/-3.43	6.23		pCi/L						
Cobalt-60	U	0.923	+/-3.18	6.34		pCi/L						
Europium-152	U	5.80	+/-10.1	18.8		pCi/L						
Europium-154	U	5.81	+/-10.7	19.5		pCi/L						
Europium-155	U	-2.97	+/-12.4	21.0		pCi/L						
Iridium-192	U	1.80	+/-3.62	6.72		pCi/L						
Iron-59	U	-0.368	+/-8.33	13.5		pCi/L						
Lead-210	U	89.1	+/-1220	2160		pCi/L						
Lead-212	U	4.73	+/-7.93	11.9		pCi/L						
Lead-214	U	5.97	+/-13.0	15.8		pCi/L						
Manganese-54	U	-2.02	+/-3.44	5.99		pCi/L						
Mercury-203	U	-3.13	+/-4.31	7.37		pCi/L						
Neodymium-147	U	45.1	+/-69.7	131		pCi/L						



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 335887019

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	12.9	+/-30.3	53.2	pCi/L
Niobium-94	U	0.527	+/-3.28	6.17	pCi/L
Niobium-95	U	-0.623	+/-3.70	6.79	pCi/L
Potassium-40	U	31.1	+/-56.3	106	pCi/L
Promethium-144	U	1.82	+/-3.40	6.60	pCi/L
Promethium-146	U	-1.43	+/-4.14	7.17	pCi/L
Radium-228	U	24.8	+/-18.2	33.9	pCi/L
Ruthenium-106	U	-21.9	+/-34.0	56.0	pCi/L
Silver-110m	U	1.11	+/-3.06	5.95	pCi/L
Sodium-22	U	1.49	+/-3.90	6.87	pCi/L
Thallium-208	U	2.87	+/-4.48	7.94	pCi/L
Thorium-230	U	1370	+/-2420	2600	pCi/L
Thorium-234	U	-66.6	+/-308	434	pCi/L
Tin-113	U	2.71	+/-4.52	8.47	pCi/L
Uranium-235	U	-3.55	+/-28.2	39.8	pCi/L
Uranium-238	U	-66.6	+/-308	434	pCi/L
Yttrium-88	U	2.35	+/-2.61	8.80	pCi/L
Zinc-65	U	-2.43	+/-7.03	12.5	pCi/L
Zirconium-95	U	-1.27	+/-6.42	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	18.8	+/-3.81	4.39	5.00	pCi/L	JAOC	11/06/13	2006	1341309	3
Beta	53.7	+/-2.75	1.97	5.00	pCi/L					
Alpha	19.5	+/-13.1	19.0	5.00	pCi/L	JAOC	11/11/13	1526	1341309	4
Beta	61.8	+/-8.99	7.91	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	64.9	+/-125	213	300	pCi/L	MYM1	11/06/13	0136	1341886	5
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# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	335887019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			98.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	335887020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 13:25		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.4	+/-22.5	21.6		pCi/L		RXF2	11/01/13	1706 1341420	1
Americium-241	U	5.32	+/-21.9	36.6		pCi/L					
Antimony-124	U	7.08	+/-10.1	21.3		pCi/L					
Antimony-125	U	-2.26	+/-8.77	15.5		pCi/L					
Barium-133	U	-0.391	+/-4.40	6.97		pCi/L					
Barium-140	U	-3.55	+/-10.3	18.8		pCi/L					
Beryllium-7	UI	0.00	+/-40.8	50.6		pCi/L					
Bismuth-212	U	22.9	+/-46.7	82.5		pCi/L					
Bismuth-214	U	2.66	+/-9.36	16.2		pCi/L					
Cerium-139	U	-0.582	+/-3.13	4.78		pCi/L					
Cerium-141	U	-0.274	+/-6.55	11.4		pCi/L					
Cerium-144	U	-7.25	+/-20.0	34.3		pCi/L					
Cesium-134	U	-1.73	+/-3.63	6.45		pCi/L					
Cesium-136	U	14.7	+/-8.99	19.8		pCi/L					
Cesium-137	U	0.0714	+/-3.31	5.93	10.0	pCi/L					
Chromium-51	U	4.51	+/-40.0	73.1		pCi/L					
Cobalt-56	U	-1.73	+/-3.87	6.84		pCi/L					
Cobalt-57	U	-0.164	+/-2.45	4.31		pCi/L					
Cobalt-58	U	-0.861	+/-3.81	6.93		pCi/L					
Cobalt-60	U	1.93	+/-3.68	7.55		pCi/L					
Europium-152	U	-3.34	+/-9.13	15.6		pCi/L					
Europium-154	U	2.90	+/-9.49	18.6		pCi/L					
Europium-155	U	1.20	+/-9.88	17.7		pCi/L					
Iridium-192	U	0.198	+/-3.42	6.26		pCi/L					
Iron-59	U	10.9	+/-7.53	16.6		pCi/L					
Lead-210	U	-300	+/-800	1340		pCi/L					
Lead-212	U	6.54	+/-9.11	12.9		pCi/L					
Lead-214	U	7.73	+/-11.7	15.9		pCi/L					
Manganese-54	U	-0.874	+/-3.15	5.70		pCi/L					
Mercury-203	U	-3.64	+/-4.54	6.34		pCi/L					
Neodymium-147	U	85.7	+/-54.4	114		pCi/L					
Neptunium-239	U	-5.64	+/-25.5	44.4		pCi/L					
Niobium-94	U	1.80	+/-3.21	6.26		pCi/L					
Niobium-95	U	1.95	+/-3.65	7.17		pCi/L					
Potassium-40	U	15.1	+/-63.8	65.4		pCi/L					
Promethium-144	U	-8.47	+/-6.70	5.82		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	335887020	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.932	+/-4.01	7.08	pCi/L
Radium-228	U	12.4	+/-22.5	21.6	pCi/L
Ruthenium-106	U	14.2	+/-32.1	59.4	pCi/L
Silver-110m	U	-1.87	+/-3.09	5.12	pCi/L
Sodium-22	U	1.03	+/-3.35	6.56	pCi/L
Thallium-208	U	0.718	+/-4.42	7.45	pCi/L
Thorium-230	U	76.0	+/-1580	2410	pCi/L
Thorium-234	U	165	+/-310	413	pCi/L
Tin-113	U	-0.535	+/-4.36	7.81	pCi/L
Uranium-235	U	-6.72	+/-23.2	36.5	pCi/L
Uranium-238	U	165	+/-310	413	pCi/L
Yttrium-88	U	-2.29	+/-4.48	6.37	pCi/L
Zinc-65	U	-2.62	+/-8.97	13.5	pCi/L
Zirconium-95	U	-2.23	+/-6.27	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	14.7	+/-5.33	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	265	+/-8.93	2.47	5.00	pCi/L					
Alpha	13.5	+/-8.32	9.98	5.00	pCi/L	JAOC	11/11/13	1526	1341309	3
Beta	273	+/-14.2	4.86	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	532	+/-151	220	300	pCi/L	MYM1	11/06/13	0259	1341886	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32  
Sample ID: 335887020

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 335887021  
Matrix: Ground Water  
Collect Date: 14-OCT-13 11:37  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.32	+/-25.0	37.0		pCi/L		RXF2	11/01/13	1724 1341421	1
Americium-241	U	4.69	+/-6.05	10.6		pCi/L					
Antimony-124	U	1.69	+/-12.6	25.2		pCi/L					
Antimony-125	U	-3.91	+/-10.1	17.8		pCi/L					
Barium-133	U	0.412	+/-6.72	8.51		pCi/L					
Barium-140	U	4.88	+/-15.9	31.7		pCi/L					
Beryllium-7	U	39.2	+/-41.3	74.3		pCi/L					
Bismuth-212	U	-63.2	+/-67.0	107		pCi/L					
Bismuth-214	U	7.81	+/-13.0	20.7		pCi/L					
Cerium-139	U	-2.11	+/-2.98	5.03		pCi/L					
Cerium-141	U	-3.43	+/-7.29	11.0		pCi/L					
Cerium-144	U	24.9	+/-25.5	35.5		pCi/L					
Cesium-134	U	0.624	+/-5.41	10.2		pCi/L					
Cesium-136	U	-5.79	+/-14.8	26.2		pCi/L					
Cesium-137	U	2.84	+/-4.62	8.79	10.0	pCi/L					
Chromium-51	U	-7.48	+/-42.5	77.3		pCi/L					
Cobalt-56	U	0.809	+/-5.07	9.64		pCi/L					
Cobalt-57	U	3.37	+/-2.63	4.08		pCi/L					
Cobalt-58	U	3.11	+/-4.71	9.49		pCi/L					
Cobalt-60	U	0.927	+/-4.22	8.59		pCi/L					
Europium-152	U	3.13	+/-10.2	19.2		pCi/L					
Europium-154	U	11.5	+/-11.8	25.9		pCi/L					
Europium-155	U	5.77	+/-8.78	16.3		pCi/L					
Iridium-192	U	-1.54	+/-3.87	6.92		pCi/L					
Iron-59	U	3.42	+/-9.85	19.5		pCi/L					
Lead-210	U	93.0	+/-124	98.5		pCi/L					
Lead-212	U	2.65	+/-12.2	14.7		pCi/L					
Lead-214	U	3.12	+/-12.4	17.5		pCi/L					
Manganese-54	U	0.0126	+/-4.64	8.64		pCi/L					
Mercury-203	U	2.48	+/-4.94	7.94		pCi/L					
Neodymium-147	U	31.7	+/-75.2	143		pCi/L					
Neptunium-239	U	-14.1	+/-22.5	38.9		pCi/L					
Niobium-94	U	-1.45	+/-4.42	7.55		pCi/L					
Niobium-95	U	-4.44	+/-5.12	8.73		pCi/L					
Potassium-40	U	10.1	+/-56.6	77.0		pCi/L					
Promethium-144	U	1.11	+/-4.64	8.40		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 335887021

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.88	+/-4.86	9.28	pCi/L
Radium-228	U	-7.32	+/-25.0	37.0	pCi/L
Ruthenium-106	U	-19.3	+/-39.4	66.9	pCi/L
Silver-110m	U	-4.29	+/-4.57	7.30	pCi/L
Sodium-22	U	2.61	+/-4.41	9.08	pCi/L
Thallium-208	U	-4.27	+/-5.78	9.07	pCi/L
Thorium-230	U	246	+/-651	950	pCi/L
Thorium-234	U	-25.9	+/-88.8	138	pCi/L
Tin-113	U	-3.6	+/-4.86	8.36	pCi/L
Uranium-235	U	1.94	+/-23.1	33.5	pCi/L
Uranium-238	U	-25.9	+/-88.8	138	pCi/L
Yttrium-88	U	-7.5	+/-5.77	8.57	pCi/L
Zinc-65	U	9.93	+/-10.8	20.3	pCi/L
Zirconium-95	U	-8.78	+/-9.06	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.17	+/-2.98	4.78	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		9.44	+/-2.58	2.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-21.9	+/-120	214	300	pCi/L	MYM1	11/06/13	0315	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.8	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 38  
Sample ID: 335887022  
Matrix: Ground Water  
Collect Date: 14-OCT-13 09:00  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.1	+/-15.9	26.6		pCi/L		RXF2	11/02/13	1618 1341421	1
Americium-241	U	10.6	+/-11.0	18.2		pCi/L					
Antimony-124	U	2.85	+/-9.02	17.9		pCi/L					
Antimony-125	U	-6.89	+/-9.29	15.1		pCi/L					
Barium-133	U	-2.95	+/-4.23	6.98		pCi/L					
Barium-140	U	11.1	+/-9.57	21.3		pCi/L					
Beryllium-7	U	-9.49	+/-32.7	58.6		pCi/L					
Bismuth-212	U	72.1	+/-66.1	96.1		pCi/L					
Bismuth-214	U	-0.819	+/-9.86	15.1		pCi/L					
Cerium-139	U	1.10	+/-3.02	5.43		pCi/L					
Cerium-141	U	-0.698	+/-6.77	11.6		pCi/L					
Cerium-144	U	13.4	+/-19.6	34.8		pCi/L					
Cesium-134	U	-0.165	+/-3.59	6.31		pCi/L					
Cesium-136	U	-6.44	+/-11.9	21.1		pCi/L					
Cesium-137	U	2.56	+/-3.38	6.53	10.0	pCi/L					
Chromium-51	U	-7.14	+/-40.8	70.3		pCi/L					
Cobalt-56	U	5.43	+/-3.97	8.00		pCi/L					
Cobalt-57	U	0.546	+/-2.38	4.30		pCi/L					
Cobalt-58	U	-1.12	+/-4.23	6.37		pCi/L					
Cobalt-60	U	-3.71	+/-4.40	6.96		pCi/L					
Europium-152	U	6.25	+/-9.94	18.0		pCi/L					
Europium-154	U	8.75	+/-6.78	16.4		pCi/L					
Europium-155	U	-4.02	+/-9.27	16.3		pCi/L					
Iridium-192	U	-1.49	+/-3.88	6.05		pCi/L					
Iron-59	U	-3.87	+/-7.39	13.2		pCi/L					
Lead-210	U	96.1	+/-346	322		pCi/L					
Lead-212	U	-0.78	+/-6.75	11.0		pCi/L					
Lead-214	U	-0.467	+/-8.82	13.5		pCi/L					
Manganese-54	U	-0.934	+/-3.16	5.55		pCi/L					
Mercury-203	U	1.26	+/-3.96	7.04		pCi/L					
Neodymium-147	U	11.0	+/-67.3	125		pCi/L					
Neptunium-239	U	7.40	+/-24.6	44.6		pCi/L					
Niobium-94	U	-0.292	+/-3.11	5.56		pCi/L					
Niobium-95	U	4.70	+/-3.82	7.64		pCi/L					
Potassium-40	U	15.5	+/-40.5	66.6		pCi/L					
Promethium-144	U	0.780	+/-3.41	6.24		pCi/L					



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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 38	Project:	WNUC00124
Sample ID:	335887022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.96	+/-3.84	7.28	pCi/L
Radium-228	U	17.1	+/-15.9	26.6	pCi/L
Ruthenium-106	U	17.7	+/-29.7	56.6	pCi/L
Silver-110m	U	0.561	+/-3.20	5.89	pCi/L
Sodium-22	U	3.09	+/-2.40	5.66	pCi/L
Thallium-208	U	0.553	+/-4.53	6.97	pCi/L
Thorium-230	UI	0.00	+/-625	1140	pCi/L
Thorium-234	U	-83.5	+/-121	180	pCi/L
Tin-113	U	-2.83	+/-4.50	7.43	pCi/L
Uranium-235	U	-2.74	+/-24.0	34.7	pCi/L
Uranium-238	U	-83.5	+/-121	180	pCi/L
Yttrium-88	U	-1.84	+/-3.97	6.93	pCi/L
Zinc-65	U	-0.563	+/-6.92	12.9	pCi/L
Zirconium-95	U	2.89	+/-6.58	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.978	+/-2.66	4.88	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		2.93	+/-1.78	2.67	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	2.68	+/-122	215	300	pCi/L	MYM1	11/06/13	0332	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	335887023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 11:24		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	16.4	+/-14.8	25.8		pCi/L		RXF2	11/02/13	1618 1341421	1
Americium-241	U	-8.14	+/-20.3	34.4		pCi/L					
Antimony-124	U	1.76	+/-8.22	16.7		pCi/L					
Antimony-125	U	3.15	+/-9.30	16.6		pCi/L					
Barium-133	U	0.720	+/-4.88	7.55		pCi/L					
Barium-140	U	-13.7	+/-13.1	18.1		pCi/L					
Beryllium-7	U	-5.88	+/-31.8	57.4		pCi/L					
Bismuth-212	U	16.8	+/-45.2	84.6		pCi/L					
Bismuth-214	U	4.47	+/-9.38	13.6		pCi/L					
Cerium-139	U	0.0473	+/-2.91	5.22		pCi/L					
Cerium-141	U	9.98	+/-8.50	12.0		pCi/L					
Cerium-144	U	-4.26	+/-21.3	35.4		pCi/L					
Cesium-134	U	2.06	+/-3.64	6.93		pCi/L					
Cesium-136	U	10.6	+/-10.1	21.0		pCi/L					
Cesium-137	U	1.29	+/-5.37	6.58	10.0	pCi/L					
Chromium-51	U	24.7	+/-41.9	75.9		pCi/L					
Cobalt-56	U	-3.15	+/-4.73	7.01		pCi/L					
Cobalt-57	U	1.94	+/-2.63	4.64		pCi/L					
Cobalt-58	U	-0.954	+/-3.82	6.68		pCi/L					
Cobalt-60	U	-2.55	+/-3.99	6.78		pCi/L					
Europium-152	U	5.91	+/-9.95	18.1		pCi/L					
Europium-154	U	3.54	+/-10.0	19.5		pCi/L					
Europium-155	U	7.94	+/-10.7	19.0		pCi/L					
Iridium-192	U	-1.36	+/-3.79	6.48		pCi/L					
Iron-59	U	-3.78	+/-6.27	11.0		pCi/L					
Lead-210	U	-614	+/-816	1150		pCi/L					
Lead-212	U	3.06	+/-7.13	11.9		pCi/L					
Lead-214	U	1.73	+/-8.24	14.2		pCi/L					
Manganese-54	U	-3.11	+/-3.99	5.41		pCi/L					
Mercury-203	U	-2.78	+/-4.74	6.82		pCi/L					
Neodymium-147	U	-18.9	+/-56.5	101		pCi/L					
Neptunium-239	U	-4.95	+/-29.5	49.4		pCi/L					
Niobium-94	U	3.30	+/-5.15	5.77		pCi/L					
Niobium-95	U	-2.71	+/-4.64	7.18		pCi/L					
Potassium-40		97.3	+/-59.0	59.7		pCi/L					
Promethium-144	U	1.64	+/-3.97	6.46		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	335887023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.48	+/-3.99	6.98	pCi/L
Radium-228	U	16.4	+/-14.8	25.8	pCi/L
Ruthenium-106	U	18.7	+/-30.3	57.8	pCi/L
Silver-110m	U	1.76	+/-2.91	5.10	pCi/L
Sodium-22	U	1.55	+/-3.51	6.92	pCi/L
Thallium-208	U	0.142	+/-5.46	6.26	pCi/L
Thorium-230	U	539	+/-1290	2280	pCi/L
Thorium-234	U	-149	+/-194	312	pCi/L
Tin-113	U	-1.52	+/-5.04	8.54	pCi/L
Uranium-235	U	6.43	+/-30.2	36.4	pCi/L
Uranium-238	U	-149	+/-194	312	pCi/L
Yttrium-88	U	7.15	+/-4.56	9.99	pCi/L
Zinc-65	U	7.56	+/-7.54	8.69	pCi/L
Zirconium-95	U	1.26	+/-6.69	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.31	+/-3.43	4.88	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	19.3	+/-2.66	2.44	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	27.2	+/-129	225	300	pCi/L	MYM1	11/06/13	0348	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 335887024  
Matrix: Ground Water  
Collect Date: 14-OCT-13 10:03  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.21	+/-16.6	24.6		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	-3.99	+/-19.1	29.2		pCi/L					
Antimony-124	U	1.73	+/-8.51	17.1		pCi/L					
Antimony-125	U	1.48	+/-8.65	15.6		pCi/L					
Barium-133	U	4.10	+/-4.67	7.85		pCi/L					
Barium-140	U	4.59	+/-10.9	21.3		pCi/L					
Beryllium-7	U	-0.725	+/-32.8	58.1		pCi/L					
Bismuth-212	U	-17.2	+/-51.4	76.8		pCi/L					
Bismuth-214	U	4.07	+/-9.43	12.2		pCi/L					
Cerium-139	U	-0.65	+/-3.19	5.31		pCi/L					
Cerium-141	U	0.839	+/-7.36	12.5		pCi/L					
Cerium-144	U	-13.3	+/-21.0	34.5		pCi/L					
Cesium-134	U	2.52	+/-3.63	6.43		pCi/L					
Cesium-136	U	-15.5	+/-11.9	18.7		pCi/L					
Cesium-137	U	0.995	+/-3.65	6.56	10.0	pCi/L					
Chromium-51	U	-13.5	+/-40.1	70.3		pCi/L					
Cobalt-56	U	3.28	+/-3.68	6.54		pCi/L					
Cobalt-57	U	-3.83	+/-2.68	4.21		pCi/L					
Cobalt-58	U	-0.945	+/-3.21	5.85		pCi/L					
Cobalt-60	U	2.05	+/-3.30	6.63		pCi/L					
Europium-152	U	-4.26	+/-9.32	16.2		pCi/L					
Europium-154	U	-2.75	+/-9.21	16.5		pCi/L					
Europium-155	U	-5.72	+/-10.5	17.5		pCi/L					
Iridium-192	U	-1.24	+/-3.38	5.93		pCi/L					
Iron-59	U	0.482	+/-6.35	12.1		pCi/L					
Lead-210	U	-47	+/-546	863		pCi/L					
Lead-212	U	5.32	+/-11.6	12.5		pCi/L					
Lead-214	U	6.09	+/-10.7	14.6		pCi/L					
Manganese-54	U	-1.09	+/-3.09	5.55		pCi/L					
Mercury-203	U	-0.298	+/-3.73	6.67		pCi/L					
Neodymium-147	U	0.0743	+/-70.3	125		pCi/L					
Neptunium-239	U	-24.6	+/-28.5	46.4		pCi/L					
Niobium-94	U	2.02	+/-3.18	5.88		pCi/L					
Niobium-95	UI	0.00	+/-11.3	6.79		pCi/L					
Potassium-40	U	-26.4	+/-54.0	90.0		pCi/L					
Promethium-144	U	-1.06	+/-3.43	5.84		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 335887024

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.45	+/-4.22	7.66	pCi/L
Radium-228	U	-4.21	+/-16.6	24.6	pCi/L
Ruthenium-106	U	-12.8	+/-31.5	53.5	pCi/L
Silver-110m	U	-0.896	+/-3.36	5.76	pCi/L
Sodium-22	U	-0.878	+/-3.27	5.87	pCi/L
Thallium-208	U	-4.2	+/-4.27	6.32	pCi/L
Thorium-230	U	271	+/-1260	2070	pCi/L
Thorium-234	U	81.7	+/-209	236	pCi/L
Tin-113	U	-1.94	+/-4.61	7.97	pCi/L
Uranium-235	U	-10.6	+/-24.7	37.1	pCi/L
Uranium-238	U	81.7	+/-209	236	pCi/L
Yttrium-88	U	-2.41	+/-3.53	6.16	pCi/L
Zinc-65	U	-3.48	+/-6.87	12.0	pCi/L
Zirconium-95	U	0.858	+/-7.47	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.40	+/-2.92	4.91	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		19.3	+/-3.07	3.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	47.2	+/-128	222	300	pCi/L	MYM1	11/06/13	0404	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	335887025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 11:42		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.60	+/-20.7	27.1		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	10.8	+/-19.9	21.8		pCi/L					
Antimony-124	U	3.65	+/-6.94	15.1		pCi/L					
Antimony-125	U	-0.844	+/-8.75	15.2		pCi/L					
Barium-133	U	0.400	+/-4.39	6.82		pCi/L					
Barium-140	U	2.11	+/-9.95	19.4		pCi/L					
Beryllium-7	U	1.09	+/-33.1	57.8		pCi/L					
Bismuth-212	U	-10.9	+/-42.6	76.3		pCi/L					
Bismuth-214	U	5.64	+/-12.7	11.2		pCi/L					
Cerium-139	U	0.0292	+/-2.79	4.99		pCi/L					
Cerium-141	U	3.31	+/-5.91	10.9		pCi/L					
Cerium-144	U	-1.3	+/-18.3	32.8		pCi/L					
Cesium-134	U	-2.48	+/-4.73	6.58		pCi/L					
Cesium-136	U	-2.94	+/-8.48	14.9		pCi/L					
Cesium-137	U	-4.79	+/-4.70	6.63	10.0	pCi/L					
Chromium-51	U	-6.98	+/-35.8	62.4		pCi/L					
Cobalt-56	U	2.28	+/-3.63	7.04		pCi/L					
Cobalt-57	U	-0.653	+/-2.21	3.94		pCi/L					
Cobalt-58	U	2.70	+/-3.26	6.42		pCi/L					
Cobalt-60	U	-0.053	+/-3.74	6.37		pCi/L					
Europium-152	U	-4.37	+/-9.20	15.6		pCi/L					
Europium-154	U	-7.88	+/-9.04	15.2		pCi/L					
Europium-155	U	-0.886	+/-10.1	16.9		pCi/L					
Iridium-192	U	-0.657	+/-3.23	5.62		pCi/L					
Iron-59	U	-0.235	+/-7.44	13.5		pCi/L					
Lead-210	U	20.7	+/-318	509		pCi/L					
Lead-212	U	1.40	+/-7.56	10.6		pCi/L					
Lead-214	U	11.3	+/-9.44	14.4		pCi/L					
Manganese-54	U	-0.572	+/-3.36	6.00		pCi/L					
Mercury-203	U	2.93	+/-3.77	6.97		pCi/L					
Neodymium-147	U	-39.6	+/-58.2	101		pCi/L					
Neptunium-239	U	3.67	+/-24.1	43.9		pCi/L					
Niobium-94	U	0.385	+/-3.17	5.83		pCi/L					
Niobium-95	U	-0.599	+/-4.12	6.40		pCi/L					
Potassium-40	U	-34.8	+/-49.6	86.8		pCi/L					
Promethium-144	U	-0.314	+/-3.37	6.06		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	335887025	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.42	+/-3.92	6.33	pCi/L
Radium-228	U	7.60	+/-20.7	27.1	pCi/L
Ruthenium-106	U	6.77	+/-26.7	50.5	pCi/L
Silver-110m	U	-0.868	+/-3.16	5.65	pCi/L
Sodium-22	U	-2.73	+/-3.20	5.41	pCi/L
Thallium-208	U	-3.58	+/-4.07	6.50	pCi/L
Thorium-230	UI	0.00	+/-1150	1520	pCi/L
Thorium-234	U	117	+/-155	175	pCi/L
Tin-113	U	-0.405	+/-4.02	7.02	pCi/L
Uranium-235	U	-0.726	+/-20.8	32.9	pCi/L
Uranium-238	U	117	+/-155	175	pCi/L
Yttrium-88	U	-0.981	+/-3.91	6.07	pCi/L
Zinc-65	U	5.55	+/-6.99	12.8	pCi/L
Zirconium-95	U	-1.87	+/-5.40	9.65	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	7.35	+/-3.58	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	11.2	+/-2.76	3.49	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-134	232	300	pCi/L	MYM1	11/06/13	0420	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	335887026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 12:01		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-21.4	27.3		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	14.2	+/-29.0	52.3		pCi/L					
Antimony-124	U	-5.44	+/-11.1	16.4		pCi/L					
Antimony-125	U	0.249	+/-8.79	15.8		pCi/L					
Barium-133	U	-1.72	+/-4.76	7.19		pCi/L					
Barium-140	U	1.37	+/-12.4	21.5		pCi/L					
Beryllium-7	U	-2.07	+/-33.0	58.6		pCi/L					
Bismuth-212	U	17.1	+/-46.7	90.2		pCi/L					
Bismuth-214	U	0.684	+/-12.4	17.1		pCi/L					
Cerium-139	U	-3.01	+/-3.28	5.22		pCi/L					
Cerium-141	U	-8.84	+/-8.99	13.1		pCi/L					
Cerium-144	U	-5.7	+/-23.5	39.4		pCi/L					
Cesium-134	U	-2.49	+/-3.51	6.05		pCi/L					
Cesium-136	U	-6.01	+/-11.1	19.2		pCi/L					
Cesium-137	U	2.96	+/-3.85	6.31	10.0	pCi/L					
Chromium-51	U	-10.3	+/-43.2	76.1		pCi/L					
Cobalt-56	U	-1.07	+/-3.87	6.99		pCi/L					
Cobalt-57	U	1.12	+/-3.04	5.30		pCi/L					
Cobalt-58	U	2.10	+/-3.61	7.19		pCi/L					
Cobalt-60	U	1.12	+/-3.69	7.20		pCi/L					
Europium-152	U	1.27	+/-10.3	18.6		pCi/L					
Europium-154	U	-0.253	+/-9.15	15.8		pCi/L					
Europium-155	U	13.2	+/-11.6	21.4		pCi/L					
Iridium-192	U	1.90	+/-3.73	6.92		pCi/L					
Iron-59	U	3.17	+/-8.43	16.4		pCi/L					
Lead-210	U	1430	+/-1230	2310		pCi/L					
Lead-212	U	7.18	+/-9.69	12.7		pCi/L					
Lead-214	U	1.38	+/-14.4	16.0		pCi/L					
Manganese-54	U	-1.61	+/-3.41	6.02		pCi/L					
Mercury-203	U	-2.11	+/-4.29	7.46		pCi/L					
Neodymium-147	U	1.96	+/-73.8	132		pCi/L					
Neptunium-239	U	-19.7	+/-31.3	51.5		pCi/L					
Niobium-94	U	0.531	+/-3.21	6.06		pCi/L					
Niobium-95	UI	0.00	+/-6.00	6.74		pCi/L					
Potassium-40	U	-39.8	+/-49.6	81.5		pCi/L					
Promethium-144	U	3.48	+/-3.35	6.77		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 44  
Sample ID: 335887026

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.42	+/-4.17	7.67	pCi/L
Radium-228	U	12.9	+/-21.4	27.3	pCi/L
Ruthenium-106	U	28.4	+/-31.3	60.5	pCi/L
Silver-110m	U	1.37	+/-3.64	6.25	pCi/L
Sodium-22	U	-0.0895	+/-3.24	5.59	pCi/L
Thallium-208	U	-2.41	+/-4.44	7.10	pCi/L
Thorium-230	U	1830	+/-2110	2320	pCi/L
Thorium-234	U	-98.8	+/-309	432	pCi/L
Tin-113	U	2.43	+/-4.98	9.18	pCi/L
Uranium-235	U	-3.6	+/-26.4	40.6	pCi/L
Uranium-238	U	-98.8	+/-309	432	pCi/L
Yttrium-88	U	-0.428	+/-3.36	6.66	pCi/L
Zinc-65	U	-10.9	+/-7.49	11.0	pCi/L
Zirconium-95	U	4.19	+/-6.17	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.88	+/-2.92	4.77	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		4.21	+/-2.08	2.96	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	145	+/-133	221	300	pCi/L	MYM1	11/06/13	0437	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	335887027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 09:18		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.8	+/-16.4	28.5		pCi/L		RXF2	11/02/13	1620 1341421	1
Americium-241	U	-4.6	+/-21.2	38.1		pCi/L					
Antimony-124	U	8.31	+/-8.24	19.0		pCi/L					
Antimony-125	U	-0.183	+/-8.81	15.9		pCi/L					
Barium-133	U	-2.33	+/-4.25	6.39		pCi/L					
Barium-140	U	-1.43	+/-10.1	19.1		pCi/L					
Beryllium-7	U	-3.53	+/-32.3	57.6		pCi/L					
Bismuth-212	U	6.38	+/-41.7	79.9		pCi/L					
Bismuth-214	U	11.6	+/-10.6	16.8		pCi/L					
Cerium-139	U	-0.11	+/-2.84	4.94		pCi/L					
Cerium-141	U	-2.14	+/-6.75	11.5		pCi/L					
Cerium-144	U	15.5	+/-18.7	34.5		pCi/L					
Cesium-134	U	-1.71	+/-2.69	3.88		pCi/L					
Cesium-136	U	-2.57	+/-10.8	19.4		pCi/L					
Cesium-137	U	0.417	+/-3.40	6.14	10.0	pCi/L					
Chromium-51	U	32.0	+/-34.7	67.7		pCi/L					
Cobalt-56	U	0.680	+/-3.64	6.92		pCi/L					
Cobalt-57	U	1.43	+/-2.50	4.56		pCi/L					
Cobalt-58	U	-2.27	+/-3.39	5.88		pCi/L					
Cobalt-60	U	-0.772	+/-3.42	6.44		pCi/L					
Europium-152	U	-5.89	+/-9.63	16.1		pCi/L					
Europium-154	U	-0.907	+/-8.85	16.4		pCi/L					
Europium-155	U	-8.81	+/-9.86	16.6		pCi/L					
Iridium-192	U	-1.58	+/-3.28	5.79		pCi/L					
Iron-59	U	1.67	+/-7.26	14.0		pCi/L					
Lead-210	U	174	+/-797	1390		pCi/L					
Lead-212	U	7.33	+/-11.7	12.8		pCi/L					
Lead-214	U	5.79	+/-10.7	15.4		pCi/L					
Manganese-54	U	-0.664	+/-3.45	6.27		pCi/L					
Mercury-203	U	2.08	+/-4.58	7.09		pCi/L					
Neodymium-147	U	-60.9	+/-61.3	98.9		pCi/L					
Neptunium-239	U	-10.8	+/-26.4	45.5		pCi/L					
Niobium-94	U	1.09	+/-3.41	6.48		pCi/L					
Niobium-95	U	0.378	+/-4.55	7.43		pCi/L					
Potassium-40	U	-15	+/-49.7	93.2		pCi/L					
Promethium-144	U	-9.68	+/-6.66	6.19		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 27, 2013

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 47 Project: WNUC00124  
Sample ID: 335887027 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.74	+/-4.71	6.48	pCi/L
Radium-228	U	17.8	+/-16.4	28.5	pCi/L
Ruthenium-106	U	-4.77	+/-31.8	55.6	pCi/L
Silver-110m	U	-0.16	+/-3.04	5.41	pCi/L
Sodium-22	U	-0.435	+/-3.11	5.72	pCi/L
Thallium-208	U	2.22	+/-4.73	7.58	pCi/L
Thorium-230	U	-790	+/-1500	2400	pCi/L
Thorium-234	U	-83.7	+/-224	389	pCi/L
Tin-113	U	-2.06	+/-4.26	7.42	pCi/L
Uranium-235	U	9.20	+/-23.2	37.9	pCi/L
Uranium-238	U	-83.7	+/-224	389	pCi/L
Yttrium-88	U	4.42	+/-4.34	9.68	pCi/L
Zinc-65	U	0.382	+/-7.50	12.3	pCi/L
Zirconium-95	U	-0.129	+/-6.44	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	9.98	+/-4.45	4.96	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	102	+/-6.30	4.90	5.00	pCi/L					
Alpha	U 0.517	+/-2.76	5.00	5.00	pCi/L	JAOC	11/12/13	1831	1341309	3
Beta	99.1	+/-4.96	2.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	214	+/-131	212	300	pCi/L	MYM1	11/06/13	0453	1341886	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	335887027	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	335887028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 10:50		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.7	+/-27.4	48.9		pCi/L		RXF2	11/02/13	1620 1341421	1
Americium-241	U	5.58	+/-16.9	29.3		pCi/L					
Antimony-124	U	-6.81	+/-13.4	24.5		pCi/L					
Antimony-125	U	12.3	+/-12.9	25.1		pCi/L					
Barium-133	U	-0.67	+/-6.05	9.37		pCi/L					
Barium-140	U	-11.5	+/-17.4	30.7		pCi/L					
Beryllium-7	U	-22.5	+/-40.1	71.5		pCi/L					
Bismuth-212	U	18.0	+/-77.1	134		pCi/L					
Bismuth-214	U	22.1	+/-21.2	22.9		pCi/L					
Cerium-139	U	-2.15	+/-3.64	6.43		pCi/L					
Cerium-141	U	3.34	+/-8.41	14.8		pCi/L					
Cerium-144	U	4.61	+/-26.8	46.4		pCi/L					
Cesium-134	U	-1.94	+/-4.14	7.30		pCi/L					
Cesium-136	U	11.2	+/-19.3	39.6		pCi/L					
Cesium-137	U	-1.48	+/-5.72	9.64	10.0	pCi/L					
Chromium-51	U	-22.8	+/-54.0	93.4		pCi/L					
Cobalt-56	U	-2.36	+/-5.20	9.06		pCi/L					
Cobalt-57	U	0.820	+/-3.27	5.71		pCi/L					
Cobalt-58	U	-4.64	+/-4.81	7.61		pCi/L					
Cobalt-60	U	-4.02	+/-4.54	7.24		pCi/L					
Europium-152	U	3.16	+/-14.5	23.4		pCi/L					
Europium-154	U	-0.142	+/-14.6	28.4		pCi/L					
Europium-155	U	0.263	+/-12.0	20.9		pCi/L					
Iridium-192	U	0.186	+/-5.60	9.34		pCi/L					
Iron-59	U	0.514	+/-10.3	20.6		pCi/L					
Lead-210	U	286	+/-392	648		pCi/L					
Lead-212	U	8.61	+/-13.4	17.6		pCi/L					
Lead-214	U	6.69	+/-13.1	21.3		pCi/L					
Manganese-54	U	-6.59	+/-5.76	8.97		pCi/L					
Mercury-203	U	-0.322	+/-5.61	10.0		pCi/L					
Neodymium-147	U	30.0	+/-93.5	182		pCi/L					
Neptunium-239	U	11.4	+/-32.5	57.4		pCi/L					
Niobium-94	U	-4.0	+/-5.35	8.36		pCi/L					
Niobium-95	U	1.04	+/-6.22	11.7		pCi/L					
Potassium-40	U	-59.5	+/-74.0	111		pCi/L					
Promethium-144	U	0.939	+/-5.20	9.75		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 48  
Sample ID: 335887028

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.43	+/-5.89	10.2	pCi/L
Radium-228	U	12.7	+/-27.4	48.9	pCi/L
Ruthenium-106	U	-27.7	+/-40.8	70.2	pCi/L
Silver-110m	U	-2.51	+/-4.65	8.13	pCi/L
Sodium-22	U	-0.0506	+/-5.15	10.1	pCi/L
Thallium-208	U	4.39	+/-7.18	7.99	pCi/L
Thorium-230	U	-468	+/-1310	2010	pCi/L
Thorium-234	U	10.4	+/-197	273	pCi/L
Tin-113	U	3.38	+/-6.97	12.9	pCi/L
Uranium-235	U	-17.3	+/-28.2	42.4	pCi/L
Uranium-238	U	10.4	+/-197	273	pCi/L
Yttrium-88	U	-3.73	+/-7.35	13.2	pCi/L
Zinc-65	U	-6.14	+/-11.0	19.5	pCi/L
Zirconium-95	U	-6.84	+/-10.3	17.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.70	+/-3.47	4.80	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	16.6	+/-3.06	2.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-126	218	300	pCi/L	MYM1	11/06/13	0509	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## QC Summary

Report Date: November 27, 2013

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 335887

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1346857										
QC1202986880	335887010	DUP									
Uranium-233/234		3.81		4.34	pCi/L	13.1		(0%-20%)	HAKB	11/18/13	10:46
	Uncertainty	+/-1.03		+/-1.10							
Uranium-235/236	U	0.407	U	0.329	pCi/L	N/A		N/A			
	Uncertainty	+/-0.414		+/-0.388							
Uranium-238		1.99		1.75	pCi/L	12.6		(0%-20%)			
	Uncertainty	+/-0.744		+/-0.709							
QC1202986881	LCS										
Uranium-233/234				25.3	pCi/L					11/18/13	10:46
	Uncertainty			+/-2.40							
Uranium-235/236				1.98	pCi/L						
	Uncertainty			+/-0.761							
Uranium-238	27.0			25.9	pCi/L		95.8	(75%-125%)			
	Uncertainty			+/-2.43							
QC1202986879	MB										
Uranium-233/234			U	-0.0174	pCi/L					11/18/13	10:46
	Uncertainty			+/-0.150							
Uranium-235/236			U	0.00	pCi/L						
	Uncertainty			+/-0.181							
Uranium-238			U	-0.0174	pCi/L						
	Uncertainty			+/-0.150							
<b>Rad Gamma Spec</b>											
Batch	1341420										
QC1202973518	335887001	DUP									
Actinium-228	U	6.48	U	-17.4	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-27.9		+/-19.6							
Americium-241	U	7.21	U	-1.85	pCi/L	N/A		N/A			
	Uncertainty	+/-22.7		+/-11.2							
Antimony-124	U	12.6	U	-4.29	pCi/L	N/A		N/A			
	Uncertainty	+/-9.93		+/-9.37							
Antimony-125	U	-0.513	U	0.480	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-8.44							
Barium-133	U	-2.19	U	-7.02	pCi/L	N/A		N/A			
	Uncertainty	+/-5.62		+/-4.36							
Barium-140	U	-2.09	U	4.66	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-14.0							
Beryllium-7	U	44.3	U	-19.1	pCi/L	N/A		N/A			
	Uncertainty	+/-95.2		+/-30.1							
Bismuth-212	U	-39	U	-9.0	pCi/L	N/A		N/A			
	Uncertainty	+/-64.9		+/-60.0							
Bismuth-214	U	5.73	U	0.770	pCi/L	N/A		N/A			

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
	Uncertainty										
		+/-16.0		+/-14.5							
Cerium-139	U	-1.29	U	3.39	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-3.85		+/-2.92							
Cerium-141	U	-1.45	U	4.47	pCi/L	N/A		N/A			
	Uncertainty	+/-8.72		+/-6.64							
Cerium-144	U	2.03	U	-5.06	pCi/L	N/A		N/A			
	Uncertainty	+/-24.7		+/-17.4							
Cesium-134	U	-3.04	U	-1.83	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-3.79							
Cesium-136	U	9.23	U	3.30	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-10.9							
Cesium-137	U	2.77	U	-0.804	pCi/L	N/A		N/A			
	Uncertainty	+/-6.06		+/-4.32							
Chromium-51	U	-51.8	U	20.6	pCi/L	N/A		N/A			
	Uncertainty	+/-49.9		+/-38.3							
Cobalt-56	U	1.92	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-4.57		+/-4.05							
Cobalt-57	U	-0.677	U	-0.334	pCi/L	N/A		N/A			
	Uncertainty	+/-3.12		+/-2.18							
Cobalt-58	U	-3.18	U	2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.75		+/-3.63							
Cobalt-60	U	-4.42	U	1.93	pCi/L	N/A		N/A			
	Uncertainty	+/-4.30		+/-3.70							
Europium-152	U	3.29	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-11.6		+/-8.52							
Europium-154	U	-7.01	U	4.01	pCi/L	N/A		N/A			
	Uncertainty	+/-10.5		+/-9.20							
Europium-155	U	-0.878	U	-7.2	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-8.25							
Iridium-192	U	5.31	U	-4.25	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-4.16							
Iron-59	U	-0.462	U	6.43	pCi/L	N/A		N/A			
	Uncertainty	+/-7.94		+/-7.32							
Lead-210	U	-651	U	132	pCi/L	N/A		N/A			
	Uncertainty	+/-637		+/-357							
Lead-212	U	9.27	U	2.69	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-8.57							
Lead-214	U	-1.19	U	-1.96	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-10.2							
Manganese-54	U	1.01	U	-3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.68		+/-3.47							
Mercury-203	U	4.50	U	1.01	pCi/L	N/A		N/A			
	Uncertainty	+/-6.63		+/-3.49							



# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Neodymium-147	U	18.8	U	14.3	pCi/L	N/A		N/A			
	Uncertainty	+/-76.4		+/-63.1							
Neptunium-239	U	-12.6	U	-16.4	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-32.5		+/-22.0							
Niobium-94	U	0.540	U	-0.463	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-3.26							
Niobium-95	U	-2.12	U	0.464	pCi/L	N/A		N/A			
	Uncertainty	+/-5.05		+/-4.44							
Potassium-40	U	-48.5	U	33.5	pCi/L	N/A		N/A			
	Uncertainty	+/-54.2		+/-81.6							
Promethium-144	U	-1.04	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-3.27							
Promethium-146	U	-0.372	U	3.21	pCi/L	N/A		N/A			
	Uncertainty	+/-5.01		+/-3.88							
Radium-228	U	6.48	U	-17.4	pCi/L	N/A		N/A			
	Uncertainty	+/-27.9		+/-19.6							
Ruthenium-106	U	-2.35	U	6.56	pCi/L	N/A		N/A			
	Uncertainty	+/-44.5		+/-28.8							
Silver-110m	U	2.02	U	-3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.42		+/-3.22							
Sodium-22	U	-2.75	U	1.37	pCi/L	N/A		N/A			
	Uncertainty	+/-3.75		+/-3.25							
Thallium-208	U	-0.11	U	-2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-4.84		+/-5.37							
Thorium-230	U	-116	U	336	pCi/L	N/A		N/A			
	Uncertainty	+/-1560		+/-847							
Thorium-234	U	289	U	41.7	pCi/L	N/A		N/A			
	Uncertainty	+/-353		+/-177							
Tin-113	U	-1.79	U	0.685	pCi/L	N/A		N/A			
	Uncertainty	+/-5.44		+/-4.96							
Uranium-235	U	11.5	U	13.6	pCi/L	N/A		N/A			
	Uncertainty	+/-31.4		+/-30.1							
Uranium-238	U	289	U	41.7	pCi/L	N/A		N/A			
	Uncertainty	+/-353		+/-177							
Yttrium-88	U	-0.296	U	-0.568	pCi/L	N/A		N/A			
	Uncertainty	+/-3.79		+/-4.33							
Zinc-65	U	2.79	U	-10.6	pCi/L	N/A		N/A			
	Uncertainty	+/-7.73		+/-8.60							
Zirconium-95	U	-3.29	U	0.549	pCi/L	N/A		N/A			
	Uncertainty	+/-9.53		+/-6.92							
QC1202973519	LCS										
Actinium-228			U	315	pCi/L					11/01/13	14:23
	Uncertainty			+/-499							
Americium-241	1.11E+05			1.21E+05	pCi/L		109	(75%-125%)			
	Uncertainty										

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
				+/-1100							
Antimony-124			U	-11.1	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-127							
Antimony-125			U	-150	pCi/L						
	Uncertainty			+/-261							
Barium-133			U	-70.2	pCi/L						
	Uncertainty			+/-107							
Barium-140			U	-30.1	pCi/L						
	Uncertainty			+/-91.4							
Beryllium-7			U	155	pCi/L						
	Uncertainty			+/-826							
Bismuth-212			U	-373	pCi/L						
	Uncertainty			+/-1320							
Bismuth-214			U	-90.7	pCi/L						
	Uncertainty			+/-168							
Cerium-139				3310	pCi/L						
	Uncertainty			+/-119							
Cerium-141			U	56.0	pCi/L						
	Uncertainty			+/-114							
Cerium-144			U	-164	pCi/L						
	Uncertainty			+/-483							
Cesium-134			U	71.0	pCi/L						
	Uncertainty			+/-116							
Cesium-136			U	154	pCi/L						
	Uncertainty			+/-241							
Cesium-137	45700			47300	pCi/L		103	(75%-125%)			
	Uncertainty			+/-401							
Chromium-51			U	321	pCi/L						
	Uncertainty			+/-793							
Cobalt-56			U	107	pCi/L						
	Uncertainty			+/-120							
Cobalt-57				9010	pCi/L						
	Uncertainty			+/-155							
Cobalt-58			U	-9.43	pCi/L						
	Uncertainty			+/-129							
Cobalt-60	61500			61300	pCi/L		99.8	(75%-125%)			
	Uncertainty			+/-500							
Europium-152			U	10.8	pCi/L						
	Uncertainty			+/-246							
Europium-154			U	-57.7	pCi/L						
	Uncertainty			+/-178							
Europium-155			U	-0.768	pCi/L						
	Uncertainty			+/-246							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Iridium-192			U	-38.8	pCi/L						
	Uncertainty			+/-82.5							
Iron-59			U	-104	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-251							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-15500							
Lead-212			U	94.3	pCi/L						
	Uncertainty			+/-138							
Lead-214			U	37.1	pCi/L						
	Uncertainty			+/-184							
Manganese-54			U	-53.7	pCi/L						
	Uncertainty			+/-110							
Mercury-203			U	20.2	pCi/L						
	Uncertainty			+/-83.8							
Neodymium-147			U	-628	pCi/L						
	Uncertainty			+/-951							
Neptunium-239			U	66.0	pCi/L						
	Uncertainty			+/-738							
Niobium-94			U	-2.14	pCi/L						
	Uncertainty			+/-83.3							
Niobium-95			U	-134	pCi/L						
	Uncertainty			+/-103							
Potassium-40			U	-389	pCi/L						
	Uncertainty			+/-473							
Promethium-144			U	6.88	pCi/L						
	Uncertainty			+/-84.7							
Promethium-146			U	26.2	pCi/L						
	Uncertainty			+/-121							
Radium-228			U	315	pCi/L						
	Uncertainty			+/-499							
Ruthenium-106			U	225	pCi/L						
	Uncertainty			+/-793							
Silver-110m				669	pCi/L						
	Uncertainty			+/-112							
Sodium-22			U	-21.2	pCi/L						
	Uncertainty			+/-64.4							
Thallium-208			U	-25	pCi/L						
	Uncertainty			+/-87.7							
Thorium-230			U	32500	pCi/L						
	Uncertainty			+/-30200							
Thorium-234			U	-8220	pCi/L						
	Uncertainty			+/-4360							
Tin-113				3190	pCi/L						
	Uncertainty			+/-192							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Uranium-235			U	126	pCi/L						
	Uncertainty			+/-418							
Uranium-238			U	-8220	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-4360							
Yttrium-88				4100	pCi/L						
	Uncertainty			+/-163							
Zinc-65				31300	pCi/L						
	Uncertainty			+/-653							
Zirconium-95			U	-83.3	pCi/L						
	Uncertainty			+/-184							
QC1202973517	MB										
Actinium-228			U	-4.74	pCi/L					11/01/13	12:39
	Uncertainty			+/-21.4							
Americium-241			U	4.91	pCi/L						
	Uncertainty			+/-11.8							
Antimony-124			U	4.86	pCi/L						
	Uncertainty			+/-7.81							
Antimony-125			U	-1.43	pCi/L						
	Uncertainty			+/-9.65							
Barium-133			U	-3.58	pCi/L						
	Uncertainty			+/-5.58							
Barium-140			U	-2.25	pCi/L						
	Uncertainty			+/-6.24							
Beryllium-7			U	-10.5	pCi/L						
	Uncertainty			+/-30.1							
Bismuth-212			U	56.3	pCi/L						
	Uncertainty			+/-54.5							
Bismuth-214			U	-3.09	pCi/L						
	Uncertainty			+/-9.87							
Cerium-139			U	-0.114	pCi/L						
	Uncertainty			+/-2.66							
Cerium-141			U	2.40	pCi/L						
	Uncertainty			+/-5.52							
Cerium-144			U	-3.9	pCi/L						
	Uncertainty			+/-19.2							
Cesium-134			U	3.12	pCi/L						
	Uncertainty			+/-5.03							
Cesium-136			U	2.73	pCi/L						
	Uncertainty			+/-7.40							
Cesium-137			U	-1.04	pCi/L						
	Uncertainty			+/-4.63							
Chromium-51			U	-16.1	pCi/L						
	Uncertainty			+/-33.8							
Cobalt-56			U	4.76	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Cobalt-57				+/-5.02							
			U	-0.0837	pCi/L				RXF2	11/01/13	12:39
Cobalt-58	Uncertainty			+/-2.52							
			U	3.75	pCi/L						
Cobalt-60	Uncertainty			+/-3.23							
			U	-0.928	pCi/L						
Europium-152	Uncertainty			+/-4.70							
			U	15.0	pCi/L						
Europium-154	Uncertainty			+/-13.1							
			U	-1.01	pCi/L						
Europium-155	Uncertainty			+/-11.1							
			U	-1.19	pCi/L						
Iridium-192	Uncertainty			+/-9.61							
			U	1.06	pCi/L						
Iron-59	Uncertainty			+/-3.36							
			U	-5.96	pCi/L						
Lead-210	Uncertainty			+/-6.37							
			U	-279	pCi/L						
Lead-212	Uncertainty			+/-252							
			U	3.60	pCi/L						
Lead-214	Uncertainty			+/-9.29							
			U	-5.08	pCi/L						
Manganese-54	Uncertainty			+/-10.5							
			U	-1.51	pCi/L						
Mercury-203	Uncertainty			+/-3.90							
			U	-0.927	pCi/L						
Neodymium-147	Uncertainty			+/-3.57							
			U	34.4	pCi/L						
Neptunium-239	Uncertainty			+/-33.7							
			U	-20	pCi/L						
Niobium-94	Uncertainty			+/-29.3							
			U	-2.7	pCi/L						
Niobium-95	Uncertainty			+/-3.67							
			U	-0.167	pCi/L						
Potassium-40	Uncertainty			+/-3.58							
			U	-52.4	pCi/L						
Promethium-144	Uncertainty			+/-49.7							
			U	-1.47	pCi/L						
Promethium-146	Uncertainty			+/-3.89							
			U	-0.783	pCi/L						
Radium-228	Uncertainty			+/-4.49							
			U	-4.74	pCi/L						
	Uncertainty			+/-21.4							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1341420										
Ruthenium-106			U	-16.8	pCi/L						
	Uncertainty			+/-30.4							
Silver-110m			U	-2.68	pCi/L				RXF2	11/01/13	12:39
	Uncertainty			+/-3.72							
Sodium-22			U	-0.354	pCi/L						
	Uncertainty			+/-3.91							
Thallium-208			U	1.06	pCi/L						
	Uncertainty			+/-5.89							
Thorium-230			U	768	pCi/L						
	Uncertainty			+/-946							
Thorium-234			U	0.400	pCi/L						
	Uncertainty			+/-167							
Tin-113			U	-0.0375	pCi/L						
	Uncertainty			+/-4.23							
Uranium-235			U	10.9	pCi/L						
	Uncertainty			+/-24.0							
Uranium-238			U	0.400	pCi/L						
	Uncertainty			+/-167							
Yttrium-88			U	2.73	pCi/L						
	Uncertainty			+/-4.28							
Zinc-65			U	3.98	pCi/L						
	Uncertainty			+/-12.1							
Zirconium-95			U	1.38	pCi/L						
	Uncertainty			+/-7.11							
Batch	1341421										
QC1202973521 335887021 DUP											
Actinium-228	U	-7.32	U	4.74	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-25.0		+/-22.9							
Americium-241	U	4.69	U	12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-6.05		+/-25.3							
Antimony-124	U	1.69	U	0.0387	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-10.7							
Antimony-125	U	-3.91	U	12.5	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-11.7							
Barium-133	U	0.412	U	-7.16	pCi/L	N/A		N/A			
	Uncertainty	+/-6.72		+/-5.22							
Barium-140	U	4.88	U	-4.33	pCi/L	N/A		N/A			
	Uncertainty	+/-15.9		+/-14.6							
Beryllium-7	U	39.2	U	1.29	pCi/L	N/A		N/A			
	Uncertainty	+/-41.3		+/-39.7							
Bismuth-212	U	-63.2	U	2.77	pCi/L	N/A		N/A			
	Uncertainty	+/-67.0		+/-59.1							
Bismuth-214	U	7.81	U	1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-13.0		+/-14.2							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Cerium-139	U	-2.11	U	-1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-2.98		+/-4.35							
Cerium-141	U	-3.43	U	-1.06	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-7.29		+/-10.4							
Cerium-144	U	24.9	U	-16.8	pCi/L	N/A		N/A			
	Uncertainty	+/-25.5		+/-25.4							
Cesium-134	U	0.624	U	1.12	pCi/L	N/A		N/A			
	Uncertainty	+/-5.41		+/-4.92							
Cesium-136	U	-5.79	U	-8.18	pCi/L	N/A		N/A			
	Uncertainty	+/-14.8		+/-14.9							
Cesium-137	U	2.84	U	-1.09	pCi/L	N/A		N/A			
	Uncertainty	+/-4.62		+/-4.76							
Chromium-51	U	-7.48	U	-34	pCi/L	N/A		N/A			
	Uncertainty	+/-42.5		+/-56.7							
Cobalt-56	U	0.809	U	2.27	pCi/L	N/A		N/A			
	Uncertainty	+/-5.07		+/-4.82							
Cobalt-57	U	3.37	U	3.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.63		+/-3.22							
Cobalt-58	U	3.11	U	-2.11	pCi/L	N/A		N/A			
	Uncertainty	+/-4.71		+/-4.38							
Cobalt-60	U	0.927	U	-2.53	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.53							
Europium-152	U	3.13	U	-3.33	pCi/L	N/A		N/A			
	Uncertainty	+/-10.2		+/-13.8							
Europium-154	U	11.5	U	4.88	pCi/L	N/A		N/A			
	Uncertainty	+/-11.8		+/-12.8							
Europium-155	U	5.77	U	-3.04	pCi/L	N/A		N/A			
	Uncertainty	+/-8.78		+/-12.9							
Iridium-192	U	-1.54	U	3.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-4.80							
Iron-59	U	3.42	U	-5.17	pCi/L	N/A		N/A			
	Uncertainty	+/-9.85		+/-9.23							
Lead-210	U	93.0	U	-196	pCi/L	N/A		N/A			
	Uncertainty	+/-124		+/-771							
Lead-212	U	2.65	U	0.792	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-10.2							
Lead-214	U	3.12	U	-1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-12.1							
Manganese-54	U	0.0126	U	2.23	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-4.99							
Mercury-203	U	2.48	U	0.283	pCi/L	N/A		N/A			
	Uncertainty	+/-4.94		+/-5.18							
Neodymium-147	U	31.7	U	-43.6	pCi/L	N/A		N/A			
	Uncertainty	+/-75.2		+/-94.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Neptunium-239	U	-14.1	U	13.0	pCi/L	N/A		N/A			
	Uncertainty	+/-22.5		+/-33.4							
Niobium-94	U	-1.45	U	-2.4	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-4.42		+/-3.99							
Niobium-95	U	-4.44	U	0.601	pCi/L	N/A		N/A			
	Uncertainty	+/-5.12		+/-4.37							
Potassium-40	U	10.1	U	18.2	pCi/L	N/A		N/A			
	Uncertainty	+/-56.6		+/-64.4							
Promethium-144	U	1.11	U	-0.193	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-4.74							
Promethium-146	U	2.88	U	-1.1	pCi/L	N/A		N/A			
	Uncertainty	+/-4.86		+/-5.04							
Radium-228	U	-7.32	U	4.74	pCi/L	N/A		N/A			
	Uncertainty	+/-25.0		+/-22.9							
Ruthenium-106	U	-19.3	U	-25.6	pCi/L	N/A		N/A			
	Uncertainty	+/-39.4		+/-34.3							
Silver-110m	U	-4.29	U	2.57	pCi/L	N/A		N/A			
	Uncertainty	+/-4.57		+/-4.59							
Sodium-22	U	2.61	U	1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-4.55							
Thallium-208	U	-4.27	U	2.53	pCi/L	N/A		N/A			
	Uncertainty	+/-5.78		+/-6.17							
Thorium-230	U	246	U	1090	pCi/L	N/A		N/A			
	Uncertainty	+/-651		+/-1540							
Thorium-234	U	-25.9	U	37.9	pCi/L	N/A		N/A			
	Uncertainty	+/-88.8		+/-276							
Tin-113	U	-3.6	U	0.0241	pCi/L	N/A		N/A			
	Uncertainty	+/-4.86		+/-5.60							
Uranium-235	U	1.94	U	-14.7	pCi/L	N/A		N/A			
	Uncertainty	+/-23.1		+/-29.1							
Uranium-238	U	-25.9	U	37.9	pCi/L	N/A		N/A			
	Uncertainty	+/-88.8		+/-276							
Yttrium-88	U	-7.5	U	-0.227	pCi/L	N/A		N/A			
	Uncertainty	+/-5.77		+/-5.15							
Zinc-65	U	9.93	U	1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-9.69							
Zirconium-95	U	-8.78	U	5.87	pCi/L	N/A		N/A			
	Uncertainty	+/-9.06		+/-7.84							
QC1202973522	LCS										
Actinium-228			U	166	pCi/L					11/04/13	10:32
	Uncertainty			+/-581							
Americium-241	1.11E+05			1.21E+05	pCi/L		110	(75%-125%)			
	Uncertainty			+/-1220							
Antimony-124			U	-23.7	pCi/L						
	Uncertainty										



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Antimony-125	Uncertainty		U	+/-137	pCi/L				RXF2	11/04/13	10:32
				-88.7							
Barium-133	Uncertainty		U	+/-280	pCi/L						
				-25.6							
Barium-140	Uncertainty		U	+/-121	pCi/L						
				92.7							
Beryllium-7	Uncertainty		U	+/-127	pCi/L						
				1100							
Bismuth-212	Uncertainty		U	+/-1010	pCi/L						
				-589							
Bismuth-214	Uncertainty		U	+/-1590	pCi/L						
				93.5							
Cerium-139	Uncertainty			+/-199	pCi/L						
				3320							
Cerium-141	Uncertainty		U	+/-130	pCi/L						
				6.45							
Cerium-144	Uncertainty		U	+/-126	pCi/L						
				23.5							
Cesium-134	Uncertainty		U	+/-540	pCi/L						
				-15.4							
Cesium-136	Uncertainty		U	+/-137	pCi/L						
				-15.9							
Cesium-137	Uncertainty	45700		+/-325	pCi/L		104	(75%-125%)			
				47700							
Chromium-51	Uncertainty		U	+/-455	pCi/L						
				-15.5							
Cobalt-56	Uncertainty		U	+/-947	pCi/L						
				-31.4							
Cobalt-57	Uncertainty			+/-144	pCi/L						
				9020							
Cobalt-58	Uncertainty		U	+/-161	pCi/L						
				40.1							
Cobalt-60	Uncertainty	61500		+/-135	pCi/L		99.4	(75%-125%)			
				61100							
Europium-152	Uncertainty		U	+/-555	pCi/L						
				-160							
Europium-154	Uncertainty		U	+/-276	pCi/L						
				-84.1							
Europium-155	Uncertainty		U	+/-201	pCi/L						
				3.41							
Iridium-192	Uncertainty		U	+/-303	pCi/L						
				-85.2							
				+/-97.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Iron-59			U	-96.9	pCi/L						
	Uncertainty			+/-320							
Lead-210				1.51E+06	pCi/L				RXF2	11/04/13	10:32
	Uncertainty			+/-22500							
Lead-212			U	113	pCi/L						
	Uncertainty			+/-148							
Lead-214			U	-73	pCi/L						
	Uncertainty			+/-210							
Manganese-54			U	-83.9	pCi/L						
	Uncertainty			+/-149							
Mercury-203			U	42.3	pCi/L						
	Uncertainty			+/-97.0							
Neodymium-147			U	-18.3	pCi/L						
	Uncertainty			+/-1340							
Neptunium-239			U	447	pCi/L						
	Uncertainty			+/-810							
Niobium-94			U	-104	pCi/L						
	Uncertainty			+/-100							
Niobium-95			U	30.3	pCi/L						
	Uncertainty			+/-122							
Potassium-40			U	466	pCi/L						
	Uncertainty			+/-537							
Promethium-144			U	18.9	pCi/L						
	Uncertainty			+/-103							
Promethium-146			U	5.29	pCi/L						
	Uncertainty			+/-139							
Radium-228			U	166	pCi/L						
	Uncertainty			+/-581							
Ruthenium-106			U	20.1	pCi/L						
	Uncertainty			+/-954							
Silver-110m				1790	pCi/L						
	Uncertainty			+/-147							
Sodium-22			U	-28.3	pCi/L						
	Uncertainty			+/-70.8							
Thallium-208			U	65.9	pCi/L						
	Uncertainty			+/-111							
Thorium-230			U	28400	pCi/L						
	Uncertainty			+/-33700							
Thorium-234			U	-6710	pCi/L						
	Uncertainty			+/-4450							
Tin-113				3040	pCi/L						
	Uncertainty			+/-207							
Uranium-235			U	57.3	pCi/L						
	Uncertainty			+/-434							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Uranium-238			U	-6710	pCi/L						
	Uncertainty			+/-4450							
Yttrium-88				3820	pCi/L				RXF2	11/04/13	10:32
	Uncertainty			+/-202							
Zinc-65				30900	pCi/L						
	Uncertainty			+/-808							
Zirconium-95			U	-71.7	pCi/L						
	Uncertainty			+/-228							
QC1202973520	MB										
Actinium-228			U	9.81	pCi/L					11/04/13	10:31
	Uncertainty			+/-25.0							
Americium-241			U	-5.38	pCi/L						
	Uncertainty			+/-26.5							
Antimony-124			U	-2.26	pCi/L						
	Uncertainty			+/-9.73							
Antimony-125			U	-4.59	pCi/L						
	Uncertainty			+/-8.85							
Barium-133			U	-3.33	pCi/L						
	Uncertainty			+/-4.44							
Barium-140			U	1.97	pCi/L						
	Uncertainty			+/-8.83							
Beryllium-7			U	-2.85	pCi/L						
	Uncertainty			+/-33.2							
Bismuth-212			U	5.33	pCi/L						
	Uncertainty			+/-45.4							
Bismuth-214			U	-9.35	pCi/L						
	Uncertainty			+/-9.82							
Cerium-139			U	-0.973	pCi/L						
	Uncertainty			+/-2.88							
Cerium-141			U	-4.2	pCi/L						
	Uncertainty			+/-6.36							
Cerium-144			U	-11.2	pCi/L						
	Uncertainty			+/-18.4							
Cesium-134			U	2.59	pCi/L						
	Uncertainty			+/-3.70							
Cesium-136			U	8.19	pCi/L						
	Uncertainty			+/-8.85							
Cesium-137			U	0.114	pCi/L						
	Uncertainty			+/-3.73							
Chromium-51			U	-10.7	pCi/L						
	Uncertainty			+/-35.0							
Cobalt-56			U	0.142	pCi/L						
	Uncertainty			+/-4.05							
Cobalt-57			U	-0.336	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Cobalt-58				+/-2.49							
			U	2.98	pCi/L				RXF2	11/04/13	10:31
Cobalt-60	Uncertainty			+/-3.85							
			U	-2.36	pCi/L						
Europium-152	Uncertainty			+/-3.50							
			U	1.59	pCi/L						
Europium-154	Uncertainty			+/-9.99							
			U	10.7	pCi/L						
Europium-155	Uncertainty			+/-10.4							
			U	3.73	pCi/L						
Iridium-192	Uncertainty			+/-11.6							
			U	0.527	pCi/L						
Iron-59	Uncertainty			+/-3.73							
			U	3.21	pCi/L						
Lead-210	Uncertainty			+/-10.9							
			U	101	pCi/L						
Lead-212	Uncertainty			+/-1160							
			U	2.40	pCi/L						
Lead-214	Uncertainty			+/-10.2							
			U	-8.86	pCi/L						
Manganese-54	Uncertainty			+/-9.72							
			U	-2.18	pCi/L						
Mercury-203	Uncertainty			+/-3.81							
			U	1.02	pCi/L						
Neodymium-147	Uncertainty			+/-3.42							
			U	0.175	pCi/L						
Neptunium-239	Uncertainty			+/-45.3							
			U	-12.6	pCi/L						
Niobium-94	Uncertainty			+/-25.3							
			U	2.25	pCi/L						
Niobium-95	Uncertainty			+/-3.37							
			U	0.402	pCi/L						
Potassium-40	Uncertainty			+/-3.46							
			U	-13.6	pCi/L						
Promethium-144	Uncertainty			+/-57.4							
			U	2.47	pCi/L						
Promethium-146	Uncertainty			+/-3.45							
			U	0.705	pCi/L						
Radium-228	Uncertainty			+/-4.27							
			U	9.81	pCi/L						
Ruthenium-106	Uncertainty			+/-25.0							
			U	-1.27	pCi/L						
	Uncertainty			+/-32.7							

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Silver-110m			U	-1.43	pCi/L						
	Uncertainty			+/-3.93							
Sodium-22			U	3.43	pCi/L				RXF2	11/04/13	10:31
	Uncertainty			+/-3.71							
Thallium-208			U	0.856	pCi/L						
	Uncertainty			+/-6.05							
Thorium-230			U	1410	pCi/L						
	Uncertainty			+/-1510							
Thorium-234			U	0.725	pCi/L						
	Uncertainty			+/-237							
Tin-113			U	1.78	pCi/L						
	Uncertainty			+/-4.70							
Uranium-235			U	1.06	pCi/L						
	Uncertainty			+/-22.0							
Uranium-238			U	0.725	pCi/L						
	Uncertainty			+/-237							
Yttrium-88			U	0.549	pCi/L						
	Uncertainty			+/-4.19							
Zinc-65			U	4.77	pCi/L						
	Uncertainty			+/-6.96							
Zirconium-95			U	1.56	pCi/L						
	Uncertainty			+/-6.38							
<b>Rad Gas Flow</b>											
Batch	1341307										
QC1202973257	335887001	DUP									
Alpha			U	3.05	pCi/L	52.3		(0% - 100%)	JAOC	11/10/13	11:19
	Uncertainty			+/-2.92							
Beta				12.5	pCi/L	2.60		(0% - 100%)			
	Uncertainty			+/-2.85							
QC1202973258	LCS										
Alpha				123	pCi/L		98.8	(75%-125%)		11/10/13	11:04
	Uncertainty			+/-13.2							
Beta				481	pCi/L		111	(75%-125%)			
	Uncertainty			+/-20.3							
QC1202973256	MB										
Alpha			U	0.581	pCi/L					11/10/13	11:19
	Uncertainty			+/-2.35							
Beta			U	1.22	pCi/L						
	Uncertainty			+/-2.14							
Batch	1341309										
QC1202973261	335887016	DUP									
Alpha			U	0.351	pCi/L	N/A		N/A	JAOC	11/10/13	10:45
	Uncertainty			+/-2.49							
Beta				12.5	pCi/L	48.4		(0% - 100%)			
	Uncertainty			+/-2.77							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1341309										
QC1202973262	LCS										
Alpha	123			133	pCi/L		108	(75%-125%)	JAOC	11/10/13	10:45
	Uncertainty			+/-12.8							
Beta	481			537	pCi/L		112	(75%-125%)			
	Uncertainty			+/-18.4							
QC1202973260	MB										
Alpha			U	0.542	pCi/L					11/10/13	10:45
	Uncertainty			+/-2.46							
Beta			U	0.413	pCi/L						
	Uncertainty			+/-1.77							
<b>Rad Liquid Scintillation</b>											
Batch	1341885										
QC1202974713	335887001	DUP									
Technetium-99			U	-41.5	U	-22.4	pCi/L	N/A		N/AMYM1	11/05/13 05:14
			Uncertainty	+/-133		+/-130					
QC1202974714	LCS										
Technetium-99				4340		4570	pCi/L		105	(75%-125%)	11/05/13 05:30
				Uncertainty		+/-268					
QC1202974712	MB										
Technetium-99			U	11.6	pCi/L					11/05/13	04:58
				Uncertainty		+/-133					
Batch	1341886										
QC1202974716	335887015	DUP									
Technetium-99			U	24.1	U	14.0	pCi/L	N/A		N/AMYM1	11/06/13 05:41
			Uncertainty	+/-124		+/-126					
QC1202974717	LCS										
Technetium-99				4340		4540	pCi/L		105	(75%-125%)	11/06/13 05:58
				Uncertainty		+/-272					
QC1202974715	MB										
Technetium-99			U	48.3	pCi/L					11/06/13	05:25
				Uncertainty		+/-128					

### 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 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.

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 335887

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

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**



**List of current GEL Certifications as of 27 November 2013**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122013-2
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	January 13, 2014			Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: W - N
Facility Name	Westinghouse			Protective Abutment: Y - N	Integrity Satisfactory: O - N
Well ID #	RW-2			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	31.25				
Depth To Groundwater (DGW) =	18.24				
Length Of Water Column (LWC) =	13.01				
1 Casing Volume (OCV) = LWC x 0.163	= 2.1			gal.	
3 Casing Volumes = 6.4				gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	(TB) SSB WW GP Other				
Method of Sample Collection	(TB) SSB WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 <sup>st</sup>	2.1	4.2	6.4	Well Sample Time: 0941
TIME (24 HOUR SYSTEM)	0921	0933	0936	0940	Remarks:
pH (SU)	4.85	4.56	4.48	4.44	
WATER TEMPERATURE (°C)	15.2	16.5	16.5	16.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	219	388.7	388.2	377	
TURBIDITY (SUBJECTIVE)*	1	1	1	1	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	January 13, 2014			Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal	Locking Cap: Y N
Facility Name	Westinghouse			Protective Abutment: Y N	Integrity Satisfactory: Y - N
Well ID #	N-26			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	32.00				
Depth To Groundwater (DGW) =	25.85				
Length Of Water Column (LWC) =	6.15				
1 Casing Volume (OCV) = LWC x	0.163 = 1			gal.	
3 Casing Volumes =	3			gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	TB SSB WW GP Other				
Method of Sample Collection	TB SSB WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Granfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1st	2nd	3rd	Well Sample Time:
TIME (24 HOUR SYSTEM)	1015	1017	1019	1020
pH (SU)	5.73	5.76	5.73	
WATER TEMPERATURE (°C)	15.9	17.1	17.5	17.6
SPECIFIC CONDUCTIVITY (UMHOS/CM)	172	177.4	180.3	182
TURBIDITY (SUBJECTIVE)*	1	1	1	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY) <b>January 13, 2014</b>		Casing Diameter: <b>2</b> inches		Casing Material: <b>PVC - Metal</b>
Field Personnel <b>BTF</b>		Guard Pipe: <b>PVC - Metal</b> - No		Locking Cap: <b>Y</b> - N
Facility Name <b>Westinghouse</b>		Protective Abutment: <b>Y</b> - <b>N</b>		Integrity Satisfactory: <b>Y</b> - N
Well ID # <b>MW-41</b>		Well Yield: Low - Mod. - High		
Weather Conditions		Remarks:		
Total Well Depth (TWD) = <b>27.00</b>				
Depth To Groundwater (DGW) = <b>15.64</b>				
Length Of Water Column (LWC) = <b>11.36</b>				
1 Casing Volume (OCV) = LWC x <b>0.163</b> = <b>1.9</b> gal.				
3 Casing Volumes = <b>5.6</b> gal. = Standard Evacuation Volume				
Total Volume of Water Removed =				
Method of Well Evacuation <b>TB</b> SSB WW GP Other				
Method of Sample Collection <b>TB</b> SSB WW GP Other				

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1.9	3.8	5.6				
0.952	0.955	0.958	10.00			
5.63	5.53	5.63	5.63			
15.4	15.8	16.3	15.8			
261.9	408.4	414	408			
1	1	1	1			
1	1	1	1			

Well Sample Time: **1:02**

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 13, 2014		Casing Diameter:	4 inches	Casing Material:	PVC - Metal
Field Personnel		BTF		Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Facility Name		Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #		W-48		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		44.60					
Depth To Groundwater (DGW) =		26.69					
Length Of Water Column (LWC) =		17.91					
1 Casing Volume (OCV) = LWC x		0.652		=		11 gal.	
3 Casing Volumes =		33		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		TB	SSB	WW	GP	Other	
Method of Sample Collection		TB	SSB	WW	GP	Other	

**Evacuation and Collection Methods**

TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

	1	2	3	Well Sample Time:
VOLUME PURGED (GALLONS)	11			1100
TIME (24 HOUR SYSTEM)	1077	1047	1054	Remarks:
pH (SU)	5.46	5.70	5.72	
WATER TEMPERATURE (°C.)	16.2	18	12.4	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	110	109.5	106.1	
TURBIDITY (SUBJECTIVE)*	1	1	1	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PA13010  
Date Completed: 01/16/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PA13010 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PA13010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: PA13010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	01/13/2014 0941	01/13/2014
002	W-26	Aqueous	01/13/2014 1021	01/13/2014
003	MW-41	Aqueous	01/13/2014 1002	01/13/2014
004	W-48	Aqueous	01/13/2014 1100	01/13/2014

(4 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PA13010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	140		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	9.9		ug/L	7
002	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.0		ug/L	11
003	MW-41	Aqueous	cis-1,2-Dichloroethene	8260B	1.2		ug/L	16
003	MW-41	Aqueous	Tetrachloroethene	8260B	200		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	34		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.3		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	2.9		ug/L	22

(9 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 01/13/2014 0941	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 0941	BTF		
1		(Specific Con) 120.1	1	01/13/2014 0941	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 0941	BTF		
1		(Water level )	1	01/13/2014 0941	BTF		
1		(Well Depth)	1	01/13/2014 0941	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.49			su	1
Specific Conductance @ 25° C - Field		120.1	377		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.9			° C	1
Water level depth from top of casing		No Method	18.24			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/13/2014 0941							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0010	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/13/2014 0941							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0010	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	9.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/13/2014 0941

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1228	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: PA13010-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 01/13/2014 0941	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1228	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		105	41-144
2-Fluorobiphenyl		91	37-129
2-Fluorophenol		87	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		81	28-128
Terphenyl-d14		57	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	01/13/2014 1021	BTF		
1	(Specific Con)	120.1	1	01/13/2014 1021	BTF		
1	(Temperature )	SM 2550B-2010	1	01/13/2014 1021	BTF		
1	(Water level )		1	01/13/2014 1021	BTF		
1	(Well Depth)		1	01/13/2014 1021	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.73			su	1
Specific Conductance @ 25° C - Field		120.1	182		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.6			° C	1
Water level depth from top of casing		No Method	25.85			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/13/2014 1021							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0033	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.0		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/13/2014 1021							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0033	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1254	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1254	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		104	41-144
2-Fluorobiphenyl		89	37-129
2-Fluorophenol		87	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		82	28-128
Terphenyl-d14		80	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 01/13/2014 1002	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 1002	BTF		
1		(Specific Con) 120.1	1	01/13/2014 1002	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 1002	BTF		
1		(Water level )	1	01/13/2014 1002	BTF		
1		(Well Depth)	1	01/13/2014 1002	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.63			su	1
Specific Conductance @ 25° C - Field		120.1	408		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	15.8			° C	1
Water level depth from top of casing		No Method	15.66			feet	1
Well Depth		No Method	27.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/13/2014 1002							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0056	TAF		38456
2	5030B	8260B	5	01/15/2014 2233	ALL		38525

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.2		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company			Laboratory ID: PA13010-003		
Description: MW-41			Matrix: Aqueous		
Date Sampled: 01/13/2014 1002					
Date Received: 01/13/2014					

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0056	TAF		38456
2	5030B	8260B	5	01/15/2014 2233	ALL		38525

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	200		5.0	ug/L	2
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	34		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130		94	70-130
Bromofluorobenzene		108	70-130		107	70-130
Toluene-d8		101	70-130		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/13/2014 1002

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1413	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/13/2014 1002

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1413	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		96	41-144
2-Fluorobiphenyl		87	37-129
2-Fluorophenol		81	24-127
Nitrobenzene-d5		71	38-127
Phenol-d5		75	28-128
Terphenyl-d14		74	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-004
Description: W-48	Matrix: Aqueous
Date Sampled: 01/13/2014 1100	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 1100	BTF		
1		(Specific Con) 120.1	1	01/13/2014 1100	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 1100	BTF		
1		(Water level )	1	01/13/2014 1100	BTF		
1		(Well Depth)	1	01/13/2014 1100	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.72			su	1
Specific Conductance @ 25° C - Field		120.1	106		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.4			° C	1
Water level depth from top of casing		No Method	26.69			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/13/2014 1100							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0118	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.3		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/13/2014 1100							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0118	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-004

Description: W-48

Matrix: Aqueous

Date Sampled: 01/13/2014 1100

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1439	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-004

Description: W-48

Matrix: Aqueous

Date Sampled: 01/13/2014 1100

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1439	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		100	41-144
2-Fluorobiphenyl		93	37-129
2-Fluorophenol		88	24-127
Nitrobenzene-d5		74	38-127
Phenol-d5		83	28-128
Terphenyl-d14		93	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

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Level 1 Report v2.1

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Number 06788

Level 1 Report v2.1

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 13

Page 1 of 1  
Replaces Date: 09/24/13  
Effective Date: 09/26/13

### Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: ECC 11/13/14 Lot #: PA13010

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other					
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		1. Were custody seals present on the cooler?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>		2. If custody seals were present, were they intact and unbroken?		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>13-212-9</u> °C / <u>      </u> °C / <u>      </u> °C / <u>      </u> °C					
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles    IR Gun ID: # <u>3</u> IR Gun Correction Factor: <u>-0.3</u> °C					
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None					
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.					
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		14. Were any samples containers missing?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?		
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)					
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____.					
Sample(s) _____ were received with bubbles >6 mm in diameter.					
Sample(s) _____ were received with TRC >0.2 mg/L for NH <sub>3</sub> /TKN/cyanide/phenol					
Sample labels verified by: _____ Date: <u>1/13/12</u>					

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐

Did client respond:    Yes ☐    No ☐

SESI employee:

Date of response: \_\_\_\_\_

Comments:





February 12, 2014

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

Re: Environmental - PO 4500467846  
Work Order: 341588

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 17, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500467846  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

341588

VENDOR: General Engineering Laboratories (GEL)

Month: Jan

Year: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/13/14 09:41	1000	X	X	X		X	REC
WELL	#3A	1/13/14 14:14	1000	X	X	X		X	REC
WELL	#7	1/14/14 14:37	1000	X	X	X		X	REC
WELL	#10	1/14/14 14:58	1000	X	X	X		X	REC
WELL	#13R	1/14/14 14:16	1000	X	X	X		X	REC
WELL	#14	1/15/14 14:30	1000	X	X	X		X	REC
WELL	#15	1/15/14 13:45	1000	X	X	X		X	REC
WELL	#16	1/15/14 14:49	1000	X	X	X		X	REC
WELL	#17	1/15/14 10:11	1000	X	X	X		X	REC
WELL	#18	1/14/14 12:34	1000	X	X	X		X	REC
WELL	#20	1/13/14 13:32	1000	X	X	X		X	REC
WELL	#22	1/14/14 12:15	1000	X	X	X		X	REC
WELL	#23R	1/15/14 14:05	1000	X	X	X		X	REC
WELL	#24	1/13/14 11:26	1000	X	X	X		X	REC
WELL	#26	1/13/14 10:21	1000	X	X	X		X	REC
WELL	#27	1/13/14 14:29	1000	X	X	X		X	REC
WELL	#28	1/14/14 13:50	1000	X	X	X		X	REC
WELL	#29	1/14/14 11:37	1000	X	X	X		X	REC
WELL	#30	1/14/14 11:58	1000	X	X	X		X	REC
WELL	#32	1/14/14 15:16	1000	X	X	X		X	REC
WELL	#33	1/15/14 11:19	1000	X	X	X		X	REC
WELL	#38	1/14/14 09:44	1000	X	X	X		X	REC
WELL	#39	1/15/14 10:34	1000	X	X	X		X	REC
WELL	#41R	1/13/14 10:02	1000	X	X	X		X	REC
WELL	#43	1/15/14 10:55	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/16/14

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.



## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNC</u>		SDG/AR/COC/Work Order: <u>341588</u>	
Received By: <u>SHANTA WHITLOCK</u>		Date Received: <u>1-17-14 @ 9:20</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>14C</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other <u>12222 210 01 9095 0310</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 341588 GEL Work Order: 341588

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 341588001  
Matrix: Ground Water  
Collect Date: 13-JAN-14 09:41  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.99	+/-20.7	30.3		pCi/L		RXF2	01/31/14	1128 1361916	1
Americium-241	U	14.0	+/-28.2	52.6		pCi/L					
Antimony-124	U	-4.73	+/-10.5	18.9		pCi/L					
Antimony-125	U	4.62	+/-8.72	16.7		pCi/L					
Barium-133	U	-0.452	+/-5.18	8.16		pCi/L					
Barium-140	U	1.70	+/-10.2	20.9		pCi/L					
Beryllium-7	U	-4.76	+/-38.0	67.3		pCi/L					
Bismuth-212	U	20.9	+/-45.4	90.6		pCi/L					
Bismuth-214	U	11.1	+/-9.86	17.7		pCi/L					
Cerium-139	U	1.52	+/-3.13	5.58		pCi/L					
Cerium-141	U	-2.13	+/-7.77	12.2		pCi/L					
Cerium-144	U	8.10	+/-20.0	35.9		pCi/L					
Cesium-134	U	-0.838	+/-3.81	6.99		pCi/L					
Cesium-136	U	21.3	+/-8.77	23.4		pCi/L					
Cesium-137	U	1.56	+/-4.37	7.08	10.0	pCi/L					
Chromium-51	U	31.7	+/-43.1	75.0		pCi/L					
Cobalt-56	U	-2.13	+/-4.15	7.29		pCi/L					
Cobalt-57	U	-2.27	+/-2.66	4.39		pCi/L					
Cobalt-58	U	-2.85	+/-3.71	6.33		pCi/L					
Cobalt-60	U	0.607	+/-4.48	8.77		pCi/L					
Europium-152	U	-6.9	+/-9.57	16.4		pCi/L					
Europium-154	U	-5.22	+/-11.9	21.7		pCi/L					
Europium-155	U	-5.3	+/-10.9	18.6		pCi/L					
Iridium-192	U	5.33	+/-4.04	7.48		pCi/L					
Iron-59	U	-0.918	+/-10.1	18.5		pCi/L					
Lead-210	U	187	+/-1520	2450		pCi/L					
Lead-212	U	0.977	+/-8.73	13.2		pCi/L					
Lead-214	U	5.56	+/-10.4	16.1		pCi/L					
Manganese-54	U	1.21	+/-3.18	6.33		pCi/L					
Mercury-203	U	-1.01	+/-4.20	7.53		pCi/L					
Neodymium-147	U	-2.67	+/-72.4	130		pCi/L					
Neptunium-239	U	22.1	+/-27.6	51.0		pCi/L					
Niobium-94	U	-0.442	+/-3.40	6.28		pCi/L					
Niobium-95	U	1.43	+/-3.71	7.35		pCi/L					
Potassium-40	U	22.7	+/-45.2	65.3		pCi/L					
Promethium-144	U	2.22	+/-3.59	7.10		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 341588001

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.27	+/-4.28	7.69	pCi/L
Radium-228	U	1.99	+/-20.7	30.3	pCi/L
Ruthenium-106	U	-5.97	+/-34.6	60.4	pCi/L
Silver-110m	U	-1.96	+/-3.27	5.79	pCi/L
Sodium-22	U	-1.79	+/-4.21	7.69	pCi/L
Thallium-208	U	-7.87	+/-4.46	6.17	pCi/L
Thorium-230	U	-3010	+/-1850	2680	pCi/L
Thorium-234	U	-119	+/-257	418	pCi/L
Tin-113	U	-1.14	+/-4.48	7.96	pCi/L
Uranium-235	U	2.82	+/-24.8	36.8	pCi/L
Uranium-238	U	-119	+/-257	418	pCi/L
Yttrium-88	U	-0.148	+/-3.93	6.92	pCi/L
Zinc-65	U	3.88	+/-7.58	15.3	pCi/L
Zirconium-95	U	-7.83	+/-7.97	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.45	+/-3.44	4.99	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		22.9	+/-4.43	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	44.7	+/-136	235	300	pCi/L	MYM1	01/28/14	0949	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 3A	Project:	WNUC00124
Sample ID:	341588002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 14:14		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.06	+/-14.7	24.5		pCi/L		RXF2	02/04/14	0747 1361916	1
Americium-241	U	-12.2	+/-11.8	19.0		pCi/L					
Antimony-124	U	2.26	+/-7.36	15.4		pCi/L					
Antimony-125	U	5.25	+/-8.21	15.2		pCi/L					
Barium-133	U	-1.1	+/-4.35	6.51		pCi/L					
Barium-140	U	3.08	+/-9.82	20.3		pCi/L					
Beryllium-7	U	15.3	+/-30.0	57.7		pCi/L					
Bismuth-212	U	-3.45	+/-40.1	73.4		pCi/L					
Bismuth-214	UI	0.00	+/-9.86	13.9		pCi/L					
Cerium-139	U	-0.905	+/-2.80	4.31		pCi/L					
Cerium-141	U	-1.84	+/-6.95	10.8		pCi/L					
Cerium-144	U	1.04	+/-16.8	29.5		pCi/L					
Cesium-134	U	-3.5	+/-3.52	5.74		pCi/L					
Cesium-136	U	-9.45	+/-13.3	17.8		pCi/L					
Cesium-137	U	2.02	+/-3.66	6.42	10.0	pCi/L					
Chromium-51	U	4.90	+/-39.8	70.8		pCi/L					
Cobalt-56	U	-3.0	+/-4.01	6.49		pCi/L					
Cobalt-57	U	0.974	+/-2.12	3.93		pCi/L					
Cobalt-58	U	3.70	+/-4.20	6.81		pCi/L					
Cobalt-60	U	0.952	+/-2.91	5.91		pCi/L					
Europium-152	U	-9.29	+/-8.71	14.0		pCi/L					
Europium-154	U	0.771	+/-8.95	17.4		pCi/L					
Europium-155	U	3.60	+/-8.69	16.1		pCi/L					
Iridium-192	U	0.802	+/-3.31	5.94		pCi/L					
Iron-59	U	1.27	+/-7.69	14.4		pCi/L					
Lead-210	U	-96.1	+/-286	429		pCi/L					
Lead-212	U	1.73	+/-6.41	10.6		pCi/L					
Lead-214	U	11.0	+/-8.31	13.7		pCi/L					
Manganese-54	U	-0.449	+/-3.08	5.56		pCi/L					
Mercury-203	U	0.301	+/-3.67	6.52		pCi/L					
Neodymium-147	U	39.3	+/-72.3	140		pCi/L					
Neptunium-239	U	6.16	+/-22.8	41.7		pCi/L					
Niobium-94	U	0.979	+/-3.03	5.26		pCi/L					
Niobium-95	U	3.71	+/-3.32	6.85		pCi/L					
Potassium-40	U	11.9	+/-41.0	52.9		pCi/L					
Promethium-144	U	-0.521	+/-3.07	4.80		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 341588002

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.960	+/-4.00	7.14	pCi/L
Radium-228	U	3.06	+/-14.7	24.5	pCi/L
Ruthenium-106	U	3.69	+/-27.9	52.0	pCi/L
Silver-110m	U	0.774	+/-3.58	5.86	pCi/L
Sodium-22	U	0.426	+/-3.12	6.10	pCi/L
Thallium-208	U	-0.545	+/-4.05	6.23	pCi/L
Thorium-230	U	724	+/-906	1440	pCi/L
Thorium-234	U	-99.6	+/-139	217	pCi/L
Tin-113	U	0.0191	+/-3.89	6.86	pCi/L
Uranium-235	U	18.8	+/-19.5	28.8	pCi/L
Uranium-238	U	-99.6	+/-139	217	pCi/L
Yttrium-88	U	3.00	+/-3.47	7.84	pCi/L
Zinc-65	U	-3.56	+/-6.56	11.1	pCi/L
Zirconium-95	U	-1.9	+/-5.62	10.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.03	+/-2.02	4.82	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta	U	-1.06	+/-2.15	4.32	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	53.9	+/-147	255	300	pCi/L	MYM1	01/28/14	1005	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			83.4	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 14:37		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.1	+/-23.6	31.1		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	-3.37	+/-22.0	39.2		pCi/L					
Antimony-124	U	2.70	+/-9.95	20.8		pCi/L					
Antimony-125	U	2.46	+/-9.58	17.7		pCi/L					
Barium-133	U	-4.19	+/-5.54	8.04		pCi/L					
Barium-140	U	1.74	+/-12.3	25.0		pCi/L					
Beryllium-7	U	23.3	+/-39.5	74.4		pCi/L					
Bismuth-212	U	31.2	+/-57.1	96.4		pCi/L					
Bismuth-214	UI	0.00	+/-16.1	17.7		pCi/L					
Cerium-139	U	-2.29	+/-3.34	5.49		pCi/L					
Cerium-141	U	-5.47	+/-9.39	13.9		pCi/L					
Cerium-144	U	3.34	+/-22.6	39.5		pCi/L					
Cesium-134	U	0.606	+/-3.84	7.38		pCi/L					
Cesium-136	U	2.10	+/-13.2	25.4		pCi/L					
Cesium-137	U	-0.14	+/-3.23	6.14	10.0	pCi/L					
Chromium-51	U	-11.5	+/-47.2	84.0		pCi/L					
Cobalt-56	U	-4.77	+/-4.54	7.40		pCi/L					
Cobalt-57	U	-2.73	+/-2.80	4.58		pCi/L					
Cobalt-58	UI	0.00	+/-5.83	3.71		pCi/L					
Cobalt-60	U	2.55	+/-4.04	7.89		pCi/L					
Europium-152	U	-1.85	+/-9.90	17.7		pCi/L					
Europium-154	U	3.13	+/-10.7	21.8		pCi/L					
Europium-155	U	0.440	+/-12.5	21.8		pCi/L					
Iridium-192	U	1.25	+/-4.02	7.45		pCi/L					
Iron-59	U	2.56	+/-9.27	18.0		pCi/L					
Lead-210	U	-1280	+/-981	1480		pCi/L					
Lead-212	U	3.96	+/-8.12	11.0		pCi/L					
Lead-214	U	4.59	+/-13.9	16.8		pCi/L					
Manganese-54	U	1.67	+/-3.57	7.06		pCi/L					
Mercury-203	U	1.76	+/-4.66	8.65		pCi/L					
Neodymium-147	U	0.545	+/-76.6	139		pCi/L					
Neptunium-239	U	5.53	+/-29.7	52.4		pCi/L					
Niobium-94	U	-0.24	+/-3.87	6.51		pCi/L					
Niobium-95	U	-1.57	+/-3.80	6.83		pCi/L					
Potassium-40	U	-40.8	+/-50.5	95.4		pCi/L					
Promethium-144	U	-3.28	+/-4.41	6.50		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.852	+/-4.06	7.53	pCi/L
Radium-228	U	18.1	+/-23.6	31.1	pCi/L
Ruthenium-106	U	-49.3	+/-28.3	42.5	pCi/L
Silver-110m	U	-0.0745	+/-3.02	5.76	pCi/L
Sodium-22	U	1.14	+/-3.78	7.73	pCi/L
Thallium-208	U	2.89	+/-4.93	5.64	pCi/L
Thorium-230	U	145	+/-1480	2640	pCi/L
Thorium-234	U	-74.2	+/-235	393	pCi/L
Tin-113	U	1.63	+/-5.11	9.45	pCi/L
Uranium-235	U	-2.78	+/-27.4	42.2	pCi/L
Uranium-238	U	-74.2	+/-235	393	pCi/L
Yttrium-88	U	2.63	+/-5.26	10.6	pCi/L
Zinc-65	U	1.79	+/-9.04	17.1	pCi/L
Zirconium-95	U	4.48	+/-7.74	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.90	+/-3.13	4.95	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		144	+/-5.58	2.88	5.00	pCi/L					
Alpha	U	3.89	+/-3.75	4.99	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		125	+/-6.26	2.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	398	+/-147	224	300	pCi/L	MYM1	01/28/14	1021	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.6	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	341588004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 14:58		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.0705	+/-21.3	31.6		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	1.25	+/-22.7	37.3		pCi/L					
Antimony-124	U	4.81	+/-12.2	24.4		pCi/L					
Antimony-125	U	-1.94	+/-11.3	19.5		pCi/L					
Barium-133	U	-3.57	+/-5.71	8.31		pCi/L					
Barium-140	U	-12.6	+/-14.4	23.8		pCi/L					
Beryllium-7	U	11.0	+/-41.7	74.1		pCi/L					
Bismuth-212	U	5.01	+/-57.3	104		pCi/L					
Bismuth-214	U	8.61	+/-16.7	14.4		pCi/L					
Cerium-139	U	-2.99	+/-3.56	5.81		pCi/L					
Cerium-141	U	10.7	+/-8.74	14.5		pCi/L					
Cerium-144	U	-14	+/-23.6	39.7		pCi/L					
Cesium-134	U	-3.63	+/-4.53	7.46		pCi/L					
Cesium-136	U	3.39	+/-14.1	27.0		pCi/L					
Cesium-137	U	-4.38	+/-4.88	7.52	10.0	pCi/L					
Chromium-51	U	-31.8	+/-48.3	82.4		pCi/L					
Cobalt-56	U	-3.36	+/-4.97	8.24		pCi/L					
Cobalt-57	U	0.552	+/-2.97	5.23		pCi/L					
Cobalt-58	U	4.11	+/-5.38	9.21		pCi/L					
Cobalt-60	U	0.887	+/-4.14	7.91		pCi/L					
Europium-152	U	-7.5	+/-12.5	20.4		pCi/L					
Europium-154	U	2.37	+/-11.5	21.9		pCi/L					
Europium-155	U	-0.829	+/-11.7	20.6		pCi/L					
Iridium-192	U	-0.61	+/-4.30	7.57		pCi/L					
Iron-59	U	-3.24	+/-9.51	17.0		pCi/L					
Lead-210	U	358	+/-746	1180		pCi/L					
Lead-212	U	3.44	+/-10.6	13.2		pCi/L					
Lead-214	U	6.25	+/-14.1	16.5		pCi/L					
Manganese-54	U	2.12	+/-4.06	7.65		pCi/L					
Mercury-203	U	2.12	+/-4.78	8.75		pCi/L					
Neodymium-147	U	-31.9	+/-90.5	161		pCi/L					
Neptunium-239	U	10.3	+/-31.7	56.1		pCi/L					
Niobium-94	U	-0.126	+/-3.65	6.56		pCi/L					
Niobium-95	U	1.87	+/-7.37	9.07		pCi/L					
Potassium-40	U	50.5	+/-77.1	83.5		pCi/L					
Promethium-144	U	1.15	+/-3.85	7.13		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 341588004

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.492	+/-5.32	9.31	pCi/L
Radium-228	U	0.0705	+/-21.3	31.6	pCi/L
Ruthenium-106	U	7.32	+/-37.1	68.3	pCi/L
Silver-110m	U	0.165	+/-4.16	7.53	pCi/L
Sodium-22	U	0.613	+/-4.12	7.80	pCi/L
Thallium-208	U	-3.12	+/-5.35	8.53	pCi/L
Thorium-230	U	514	+/-1940	2570	pCi/L
Thorium-234	U	175	+/-353	300	pCi/L
Tin-113	U	-0.015	+/-5.43	9.55	pCi/L
Uranium-235	U	4.68	+/-36.8	37.2	pCi/L
Uranium-238	U	175	+/-353	300	pCi/L
Yttrium-88	U	-5.66	+/-5.57	8.78	pCi/L
Zinc-65	U	3.86	+/-9.62	16.4	pCi/L
Zirconium-95	U	1.42	+/-8.42	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.78	+/-3.02	4.99	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		97.1	+/-5.25	3.02	5.00	pCi/L					
Alpha	U	0.433	+/-2.80	4.92	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		86.9	+/-4.91	2.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	173	+/-147	243	300	pCi/L	MYM1	01/28/14	1038	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 341588004

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005  
Matrix: Ground Water  
Collect Date: 14-JAN-14 14:16  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.23	+/-16.9	27.8		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	-9.79	+/-27.9	49.3		pCi/L					
Antimony-124	U	6.99	+/-9.79	22.1		pCi/L					
Antimony-125	U	6.27	+/-10.1	19.1		pCi/L					
Barium-133	U	-0.037	+/-4.78	7.63		pCi/L					
Barium-140	U	12.3	+/-11.0	26.6		pCi/L					
Beryllium-7	U	12.3	+/-35.8	66.7		pCi/L					
Bismuth-212	U	1.12	+/-45.3	86.1		pCi/L					
Bismuth-214	U	10.4	+/-13.6	12.6		pCi/L					
Cerium-139	U	-2.02	+/-3.10	5.12		pCi/L					
Cerium-141	U	6.86	+/-7.52	13.8		pCi/L					
Cerium-144	U	-6.71	+/-20.3	34.8		pCi/L					
Cesium-134	U	-1.42	+/-4.14	7.45		pCi/L					
Cesium-136	U	-1.98	+/-15.2	27.8		pCi/L					
Cesium-137	U	-0.995	+/-4.31	7.42	10.0	pCi/L					
Chromium-51	U	28.1	+/-45.2	85.8		pCi/L					
Cobalt-56	U	1.35	+/-4.13	8.04		pCi/L					
Cobalt-57	U	-0.802	+/-2.69	4.64		pCi/L					
Cobalt-58	U	6.02	+/-4.15	8.98		pCi/L					
Cobalt-60	U	-3.57	+/-4.59	7.29		pCi/L					
Europium-152	U	0.146	+/-9.82	17.9		pCi/L					
Europium-154	U	-0.648	+/-11.5	22.2		pCi/L					
Europium-155	U	8.72	+/-10.8	20.1		pCi/L					
Iridium-192	U	0.441	+/-4.07	7.43		pCi/L					
Iron-59	U	2.14	+/-8.91	17.3		pCi/L					
Lead-210	U	-638	+/-1500	2230		pCi/L					
Lead-212	U	2.70	+/-7.92	12.2		pCi/L					
Lead-214	UI	0.00	+/-13.0	15.5		pCi/L					
Manganese-54	U	-1.68	+/-3.40	6.02		pCi/L					
Mercury-203	U	-0.0479	+/-4.03	7.37		pCi/L					
Neodymium-147	U	-19.8	+/-70.4	124		pCi/L					
Neptunium-239	U	13.8	+/-28.1	50.9		pCi/L					
Niobium-94	U	-3.76	+/-3.81	5.96		pCi/L					
Niobium-95	U	0.685	+/-3.99	7.68		pCi/L					
Potassium-40	U	24.5	+/-51.2	72.5		pCi/L					
Promethium-144	U	1.18	+/-3.35	6.53		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.327	+/-4.42	7.93	pCi/L
Radium-228	U	-2.23	+/-16.9	27.8	pCi/L
Ruthenium-106	U	-12	+/-32.0	54.8	pCi/L
Silver-110m	U	0.671	+/-3.74	7.13	pCi/L
Sodium-22	U	-0.138	+/-4.08	7.90	pCi/L
Thallium-208	U	-0.874	+/-4.48	7.48	pCi/L
Thorium-230	U	56.9	+/-1770	2930	pCi/L
Thorium-234	U	-57.9	+/-255	406	pCi/L
Tin-113	U	-0.674	+/-5.57	8.71	pCi/L
Uranium-235	U	-13.3	+/-21.1	35.2	pCi/L
Uranium-238	U	-57.9	+/-255	406	pCi/L
Yttrium-88	U	-1.76	+/-4.16	7.57	pCi/L
Zinc-65	U	-0.57	+/-7.60	14.1	pCi/L
Zirconium-95	U	-0.437	+/-7.39	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.94	+/-3.19	4.77	5.00	pCi/L	JAOC	01/31/14	1158	1362035	2
Beta		155	+/-7.65	2.93	5.00	pCi/L					
Alpha		5.85	+/-4.44	4.88	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		145	+/-7.42	2.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	180	+/-108	176	300	pCi/L	MYM1	02/04/14	0714	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 14	Project:	WNUC00124
Sample ID:	341588006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 14:30		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-20.6	35.0		pCi/L		RXF2	02/04/14	0820	1361916	1
Americium-241	U	-5.02	+/-25.5	43.9		pCi/L						
Antimony-124	U	-6.0	+/-9.82	17.1		pCi/L						
Antimony-125	U	-7.74	+/-10.9	18.9		pCi/L						
Barium-133	U	1.82	+/-5.32	8.43		pCi/L						
Barium-140	U	-1.84	+/-16.3	26.1		pCi/L						
Beryllium-7	U	13.2	+/-41.9	77.8		pCi/L						
Bismuth-212	U	30.8	+/-52.7	101		pCi/L						
Bismuth-214	U	8.89	+/-11.3	17.6		pCi/L						
Cerium-139	U	-2.23	+/-4.08	6.15		pCi/L						
Cerium-141	U	-7.46	+/-10.1	14.6		pCi/L						
Cerium-144	U	-8.24	+/-23.7	42.0		pCi/L						
Cesium-134	U	-2.26	+/-4.81	7.21		pCi/L						
Cesium-136	U	6.31	+/-15.8	30.5		pCi/L						
Cesium-137	U	0.0226	+/-4.33	7.78	10.0	pCi/L						
Chromium-51	U	23.3	+/-47.8	86.8		pCi/L						
Cobalt-56	U	4.33	+/-5.14	10.2		pCi/L						
Cobalt-57	U	-0.396	+/-3.05	5.47		pCi/L						
Cobalt-58	U	-0.861	+/-4.10	7.58		pCi/L						
Cobalt-60	U	-1.7	+/-5.31	9.29		pCi/L						
Europium-152	U	-5.27	+/-11.4	19.1		pCi/L						
Europium-154	U	1.13	+/-12.2	20.2		pCi/L						
Europium-155	U	6.39	+/-13.1	22.9		pCi/L						
Iridium-192	U	1.63	+/-4.45	7.97		pCi/L						
Iron-59	U	-0.00973	+/-10.4	19.3		pCi/L						
Lead-210	U	-539	+/-1020	1560		pCi/L						
Lead-212	U	5.61	+/-11.3	16.2		pCi/L						
Lead-214	U	2.03	+/-11.0	16.3		pCi/L						
Manganese-54	U	0.539	+/-3.99	7.55		pCi/L						
Mercury-203	U	0.0684	+/-5.00	8.75		pCi/L						
Neodymium-147	U	39.0	+/-80.9	154		pCi/L						
Neptunium-239	U	-24.7	+/-31.8	55.5		pCi/L						
Niobium-94	U	-0.646	+/-4.18	7.34		pCi/L						
Niobium-95	U	3.22	+/-5.43	8.83		pCi/L						
Potassium-40	U	40.9	+/-50.0	73.3		pCi/L						
Promethium-144	U	0.888	+/-4.57	8.25		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 14  
Sample ID: 341588006

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.108	+/-5.09	8.80	pCi/L
Radium-228	UI	0.00	+/-20.6	35.0	pCi/L
Ruthenium-106	U	-7.88	+/-34.9	61.9	pCi/L
Silver-110m	U	-1.82	+/-3.82	6.56	pCi/L
Sodium-22	U	0.399	+/-4.31	7.16	pCi/L
Thallium-208	U	1.30	+/-6.86	7.23	pCi/L
Thorium-230	U	-468	+/-1650	2800	pCi/L
Thorium-234	U	-352	+/-273	404	pCi/L
Tin-113	U	-3.26	+/-5.40	9.46	pCi/L
Uranium-235	U	-17.4	+/-29.3	43.0	pCi/L
Uranium-238	U	-352	+/-273	404	pCi/L
Yttrium-88	U	1.39	+/-4.59	9.50	pCi/L
Zinc-65	U	-3.17	+/-8.42	15.0	pCi/L
Zirconium-95	U	0.975	+/-7.87	14.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.01	+/-2.58	4.79	5.00	pCi/L	JAOC	01/31/14	1201	1362035	2
Beta		8.16	+/-2.88	3.78	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.9	+/-133	226	300	pCi/L	MYM1	01/28/14	1110	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	341588007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 13:45		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.6	+/-15.4	21.4		pCi/L		RXF2	02/04/14	0820 1361916	1
Americium-241	U	4.24	+/-20.0	34.1		pCi/L					
Antimony-124	U	-13.7	+/-10.9	10.5		pCi/L					
Antimony-125	U	9.16	+/-8.53	16.8		pCi/L					
Barium-133	U	-2.41	+/-4.61	7.02		pCi/L					
Barium-140	U	3.09	+/-9.66	19.6		pCi/L					
Beryllium-7	U	2.95	+/-32.1	58.5		pCi/L					
Bismuth-212	U	-17.6	+/-42.2	76.2		pCi/L					
Bismuth-214	U	11.0	+/-12.7	13.8		pCi/L					
Cerium-139	U	-0.974	+/-2.84	4.89		pCi/L					
Cerium-141	U	-0.0848	+/-8.71	12.4		pCi/L					
Cerium-144	U	-2.24	+/-18.4	32.6		pCi/L					
Cesium-134	U	-2.17	+/-3.44	6.01		pCi/L					
Cesium-136	U	8.33	+/-11.3	23.1		pCi/L					
Cesium-137	U	2.07	+/-3.25	6.24	10.0	pCi/L					
Chromium-51	U	-17.9	+/-38.9	69.0		pCi/L					
Cobalt-56	U	1.05	+/-5.05	7.70		pCi/L					
Cobalt-57	U	1.32	+/-2.44	4.49		pCi/L					
Cobalt-58	U	1.35	+/-3.33	6.58		pCi/L					
Cobalt-60	U	-1.31	+/-3.39	5.24		pCi/L					
Europium-152	U	5.63	+/-9.72	18.4		pCi/L					
Europium-154	U	1.14	+/-9.76	19.2		pCi/L					
Europium-155	U	-1.84	+/-10.2	18.2		pCi/L					
Iridium-192	U	-1.28	+/-3.57	6.38		pCi/L					
Iron-59	U	-0.291	+/-7.74	14.4		pCi/L					
Lead-210	U	-308	+/-844	1250		pCi/L					
Lead-212	U	-2.49	+/-7.20	11.6		pCi/L					
Lead-214	U	3.08	+/-12.3	14.7		pCi/L					
Manganese-54	U	-1.51	+/-3.33	5.91		pCi/L					
Mercury-203	U	-1.16	+/-4.19	7.02		pCi/L					
Neodymium-147	U	-4.72	+/-64.8	117		pCi/L					
Neptunium-239	U	-22.7	+/-29.1	43.9		pCi/L					
Niobium-94	U	4.31	+/-3.21	6.64		pCi/L					
Niobium-95	U	1.11	+/-3.43	6.70		pCi/L					
Potassium-40	U	26.6	+/-58.0	68.5		pCi/L					
Promethium-144	U	0.388	+/-3.18	6.01		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	341588007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.904	+/-3.98	7.35	pCi/L
Radium-228	U	11.6	+/-15.4	21.4	pCi/L
Ruthenium-106	U	-5.75	+/-31.4	50.7	pCi/L
Silver-110m	U	-2.04	+/-3.06	5.05	pCi/L
Sodium-22	U	-0.965	+/-3.64	6.79	pCi/L
Thallium-208	U	-3.31	+/-4.51	6.28	pCi/L
Thorium-230	U	525	+/-1810	2280	pCi/L
Thorium-234	U	61.0	+/-308	269	pCi/L
Tin-113	U	-1.49	+/-4.02	7.13	pCi/L
Uranium-235	U	0.225	+/-26.1	34.3	pCi/L
Uranium-238	U	61.0	+/-308	269	pCi/L
Yttrium-88	U	-0.495	+/-3.45	6.69	pCi/L
Zinc-65	U	-3.99	+/-8.42	12.2	pCi/L
Zirconium-95	U	4.16	+/-6.64	13.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.96	+/-2.48	4.12	5.00	pCi/L	JAOC	01/31/14	1201	1362035	2
Beta		241	+/-11.7	4.73	5.00	pCi/L					
Alpha	U	-0.854	+/-2.11	4.72	5.00	pCi/L	JAOC	02/03/14	1319	1362035	3
Beta		221	+/-11.0	4.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	483	+/-151	225	300	pCi/L	MYM1	01/28/14	1126	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 341588007

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 341588008  
Matrix: Ground Water  
Collect Date: 15-JAN-14 14:49  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.12	+/-19.1	27.9		pCi/L		RXF2	01/27/14	1358 1361916	1
Americium-241	U	-21.7	+/-20.1	34.2		pCi/L					
Antimony-124	U	4.41	+/-8.51	18.0		pCi/L					
Antimony-125	U	3.72	+/-11.8	21.5		pCi/L					
Barium-133	U	0.687	+/-6.18	9.72		pCi/L					
Barium-140	U	-3.61	+/-8.73	15.8		pCi/L					
Beryllium-7	U	-0.454	+/-38.3	68.2		pCi/L					
Bismuth-212	U	2.23	+/-75.9	104		pCi/L					
Bismuth-214	U	13.7	+/-13.1	14.6		pCi/L					
Cerium-139	U	2.11	+/-3.70	6.58		pCi/L					
Cerium-141	U	1.64	+/-10.5	11.9		pCi/L					
Cerium-144	U	-22.6	+/-26.6	41.0		pCi/L					
Cesium-134	U	1.54	+/-4.48	8.50		pCi/L					
Cesium-136	U	0.0724	+/-9.83	16.4		pCi/L					
Cesium-137	U	-2.24	+/-4.71	7.42	10.0	pCi/L					
Chromium-51	U	26.9	+/-44.8	82.7		pCi/L					
Cobalt-56	U	-0.574	+/-4.70	8.53		pCi/L					
Cobalt-57	U	-0.726	+/-3.16	5.48		pCi/L					
Cobalt-58	U	0.923	+/-4.77	8.86		pCi/L					
Cobalt-60	U	1.53	+/-3.81	7.48		pCi/L					
Europium-152	U	-4.81	+/-12.1	21.4		pCi/L					
Europium-154	U	-6.56	+/-14.5	19.7		pCi/L					
Europium-155	U	1.95	+/-12.5	22.3		pCi/L					
Iridium-192	U	1.37	+/-4.39	8.02		pCi/L					
Iron-59	U	0.796	+/-8.09	15.2		pCi/L					
Lead-210	U	-171	+/-596	942		pCi/L					
Lead-212	U	3.34	+/-11.3	14.3		pCi/L					
Lead-214	U	4.68	+/-14.5	19.0		pCi/L					
Manganese-54	U	-0.198	+/-4.43	8.07		pCi/L					
Mercury-203	U	0.706	+/-4.58	7.90		pCi/L					
Neodymium-147	U	39.8	+/-54.1	102		pCi/L					
Neptunium-239	U	22.8	+/-32.7	59.1		pCi/L					
Niobium-94	U	2.39	+/-4.32	7.89		pCi/L					
Niobium-95	U	0.840	+/-4.64	8.31		pCi/L					
Potassium-40	U	-22.3	+/-58.0	89.1		pCi/L					
Promethium-144	U	-0.603	+/-4.13	7.19		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 341588008

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.97	+/-4.97	9.26	pCi/L
Radium-228	U	2.12	+/-19.1	27.9	pCi/L
Ruthenium-106	U	0.822	+/-41.1	72.6	pCi/L
Silver-110m	U	-0.375	+/-3.96	6.98	pCi/L
Sodium-22	U	-2.35	+/-5.11	6.91	pCi/L
Thallium-208	U	5.11	+/-6.92	7.09	pCi/L
Thorium-230	U	595	+/-1920	2230	pCi/L
Thorium-234	U	-73.4	+/-208	312	pCi/L
Tin-113	U	-5.28	+/-8.89	10.0	pCi/L
Uranium-235	U	5.58	+/-35.9	37.4	pCi/L
Uranium-238	U	-73.4	+/-208	312	pCi/L
Yttrium-88	U	0.555	+/-3.48	7.16	pCi/L
Zinc-65	U	-3.61	+/-8.33	14.6	pCi/L
Zirconium-95	U	0.935	+/-8.07	14.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.311	+/-2.36	4.93	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta		22.4	+/-4.40	4.17	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	125	+/-136	229	300	pCi/L	MYM1	01/28/14	1143	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.3	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 17	Project:	WNUC00124
Sample ID:	341588009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 10:11		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.55	+/-18.3	31.0		pCi/L		RXF2	02/04/14	0820 1361916	1
Americium-241	U	-13.6	+/-5.73	8.82		pCi/L					
Antimony-124	U	0.0499	+/-11.0	21.1		pCi/L					
Antimony-125	U	4.40	+/-9.32	17.7		pCi/L					
Barium-133	U	2.38	+/-4.57	7.42		pCi/L					
Barium-140	U	3.55	+/-13.2	26.2		pCi/L					
Beryllium-7	U	-14.5	+/-37.8	66.7		pCi/L					
Bismuth-212	U	25.5	+/-49.7	94.7		pCi/L					
Bismuth-214	UI	0.00	+/-21.6	17.7		pCi/L					
Cerium-139	U	0.797	+/-2.76	5.04		pCi/L					
Cerium-141	U	-7.51	+/-7.03	10.7		pCi/L					
Cerium-144	U	22.7	+/-17.6	28.7		pCi/L					
Cesium-134	U	-1.13	+/-4.23	7.10		pCi/L					
Cesium-136	U	-3.31	+/-13.8	24.8		pCi/L					
Cesium-137	U	-1.87	+/-4.33	7.41	10.0	pCi/L					
Chromium-51	U	6.03	+/-45.8	80.7		pCi/L					
Cobalt-56	U	-2.04	+/-4.72	8.05		pCi/L					
Cobalt-57	U	0.228	+/-2.30	3.94		pCi/L					
Cobalt-58	U	2.37	+/-4.54	8.84		pCi/L					
Cobalt-60	U	3.64	+/-5.53	9.86		pCi/L					
Europium-152	U	0.803	+/-10.2	15.9		pCi/L					
Europium-154	U	4.21	+/-11.1	22.3		pCi/L					
Europium-155	U	0.0705	+/-8.73	15.0		pCi/L					
Iridium-192	U	-1.04	+/-3.90	6.70		pCi/L					
Iron-59	U	-3.9	+/-9.81	17.2		pCi/L					
Lead-210	U	81.5	+/-90.9	82.6		pCi/L					
Lead-212	U	1.28	+/-8.02	10.7		pCi/L					
Lead-214	UI	0.00	+/-14.3	16.4		pCi/L					
Manganese-54	U	4.48	+/-4.78	7.41		pCi/L					
Mercury-203	U	2.87	+/-5.62	7.04		pCi/L					
Neodymium-147	U	-5.32	+/-78.0	141		pCi/L					
Neptunium-239	U	1.58	+/-23.1	39.6		pCi/L					
Niobium-94	U	-1.46	+/-4.06	6.43		pCi/L					
Niobium-95	U	-0.594	+/-4.38	8.06		pCi/L					
Potassium-40	U	2.27	+/-51.2	66.3		pCi/L					
Promethium-144	U	3.42	+/-3.97	7.62		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 341588009

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.49	+/-4.58	8.55	pCi/L
Radium-228	U	-3.55	+/-18.3	31.0	pCi/L
Ruthenium-106	U	13.8	+/-36.6	67.8	pCi/L
Silver-110m	U	2.80	+/-4.12	7.79	pCi/L
Sodium-22	U	1.55	+/-3.93	7.93	pCi/L
Thallium-208	U	1.44	+/-4.58	6.21	pCi/L
Thorium-230	U	-723	+/-568	845	pCi/L
Thorium-234	U	-55.1	+/-70.3	131	pCi/L
Tin-113	U	2.22	+/-4.94	9.31	pCi/L
Uranium-235	U	-25.9	+/-20.2	30.4	pCi/L
Uranium-238	U	-55.1	+/-70.3	131	pCi/L
Yttrium-88	U	2.53	+/-5.97	11.4	pCi/L
Zinc-65	U	-0.492	+/-8.85	16.1	pCi/L
Zirconium-95	U	1.59	+/-8.73	16.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.89	+/-3.99	4.98	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta		517	+/-17.0	3.40	5.00	pCi/L					
Alpha	U	0.145	+/-1.94	4.03	5.00	pCi/L	JAOC	02/03/14	1319	1362035	3
Beta		457	+/-15.6	4.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	869	+/-133	176	300	pCi/L	MYM1	02/04/14	0730	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 17	Project:	WNUC00124
Sample ID:	341588009	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	341588010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 12:34		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.6	+/-16.8	27.9		pCi/L		RXF2	02/04/14	0821 1361916	1
Americium-241	U	39.7	+/-30.5	53.0		pCi/L					
Antimony-124	U	-1.72	+/-7.60	14.8		pCi/L					
Antimony-125	U	-4.28	+/-8.95	15.4		pCi/L					
Barium-133	U	-0.853	+/-4.82	7.44		pCi/L					
Barium-140	U	5.04	+/-12.9	26.3		pCi/L					
Beryllium-7	U	3.50	+/-34.9	62.8		pCi/L					
Bismuth-212	U	14.6	+/-47.5	87.5		pCi/L					
Bismuth-214	U	1.61	+/-10.8	15.9		pCi/L					
Cerium-139	U	-2.06	+/-3.90	5.60		pCi/L					
Cerium-141	U	2.93	+/-9.15	14.1		pCi/L					
Cerium-144	U	2.48	+/-23.1	39.5		pCi/L					
Cesium-134	U	1.53	+/-3.79	7.20		pCi/L					
Cesium-136	U	6.43	+/-14.8	25.7		pCi/L					
Cesium-137	U	-1.26	+/-4.27	7.10	10.0	pCi/L					
Chromium-51	U	-67.3	+/-55.4	76.7		pCi/L					
Cobalt-56	U	-1.07	+/-4.10	7.39		pCi/L					
Cobalt-57	U	-0.335	+/-3.08	5.23		pCi/L					
Cobalt-58	U	0.190	+/-4.71	6.92		pCi/L					
Cobalt-60	U	-1.47	+/-3.73	6.51		pCi/L					
Europium-152	U	2.02	+/-10.7	19.3		pCi/L					
Europium-154	U	7.85	+/-10.2	21.1		pCi/L					
Europium-155	U	6.16	+/-11.9	21.0		pCi/L					
Iridium-192	UI	0.00	+/-6.72	7.59		pCi/L					
Iron-59	U	3.87	+/-9.10	17.7		pCi/L					
Lead-210	U	748	+/-1430	2310		pCi/L					
Lead-212	U	1.44	+/-9.69	12.6		pCi/L					
Lead-214	U	10.7	+/-12.8	15.9		pCi/L					
Manganese-54	U	3.03	+/-3.54	7.11		pCi/L					
Mercury-203	U	1.31	+/-4.13	7.59		pCi/L					
Neodymium-147	U	0.408	+/-77.1	138		pCi/L					
Neptunium-239	U	27.0	+/-31.6	56.5		pCi/L					
Niobium-94	U	1.67	+/-2.85	5.66		pCi/L					
Niobium-95	U	4.85	+/-6.54	7.53		pCi/L					
Potassium-40	U	8.29	+/-46.4	65.7		pCi/L					
Promethium-144	U	0.922	+/-2.97	5.75		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 341588010

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.12	+/-4.40	7.18	pCi/L
Radium-228	U	10.6	+/-16.8	27.9	pCi/L
Ruthenium-106	U	24.1	+/-32.5	61.7	pCi/L
Silver-110m	U	-5.74	+/-3.27	5.03	pCi/L
Sodium-22	U	2.31	+/-3.64	7.41	pCi/L
Thallium-208	U	-2.48	+/-4.22	6.61	pCi/L
Thorium-230	UI	0.00	+/-2910	3180	pCi/L
Thorium-234	U	54.6	+/-346	447	pCi/L
Tin-113	U	-0.0402	+/-4.80	8.56	pCi/L
Uranium-235	U	2.26	+/-25.8	40.8	pCi/L
Uranium-238	U	54.6	+/-346	447	pCi/L
Yttrium-88	U	-2.74	+/-5.56	8.11	pCi/L
Zinc-65	U	6.39	+/-5.85	11.5	pCi/L
Zirconium-95	U	-1.63	+/-6.92	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	12.3	+/-4.59	5.43	5.00	pCi/L	JAOC	02/03/14	1323	1362035	2
Beta	196	+/-7.15	4.34	5.00	pCi/L					
Alpha	13.4	+/-6.91	10.6	5.00	pCi/L	JAOC	02/04/14	1645	1362035	3
Beta	204	+/-7.39	3.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	297	+/-111	172	300	pCi/L	MYM1	02/04/14	0746	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 341588010

Project: WNUC00124  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	341588011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 13:32		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	14.8	+/-18.3	33.8		pCi/L		RXF2	02/04/14	0823 1361916	1
Americium-241	U	2.87	+/-31.7	50.0		pCi/L					
Antimony-124	U	0.00284	+/-9.13	18.0		pCi/L					
Antimony-125	U	-9.61	+/-10.3	17.3		pCi/L					
Barium-133	U	-0.495	+/-5.14	8.08		pCi/L					
Barium-140	U	0.233	+/-13.0	25.2		pCi/L					
Beryllium-7	U	19.1	+/-39.7	74.8		pCi/L					
Bismuth-212	U	-53.9	+/-67.8	95.1		pCi/L					
Bismuth-214	U	0.665	+/-10.3	17.1		pCi/L					
Cerium-139	U	-1.19	+/-3.83	5.67		pCi/L					
Cerium-141	U	5.37	+/-8.51	14.3		pCi/L					
Cerium-144	U	-9.56	+/-23.3	39.8		pCi/L					
Cesium-134	U	-0.48	+/-4.27	7.65		pCi/L					
Cesium-136	U	-5.47	+/-14.8	26.8		pCi/L					
Cesium-137	U	0.132	+/-3.95	7.20	10.0	pCi/L					
Chromium-51	U	0.306	+/-47.7	87.0		pCi/L					
Cobalt-56	U	-0.308	+/-4.57	8.20		pCi/L					
Cobalt-57	U	0.0377	+/-3.08	5.40		pCi/L					
Cobalt-58	U	-3.72	+/-4.48	7.37		pCi/L					
Cobalt-60	U	0.840	+/-4.16	8.08		pCi/L					
Europium-152	U	-5.77	+/-10.6	18.1		pCi/L					
Europium-154	U	-3.09	+/-9.76	18.0		pCi/L					
Europium-155	U	-3.37	+/-12.6	21.9		pCi/L					
Iridium-192	U	-0.00186	+/-3.93	7.17		pCi/L					
Iron-59	U	-4.75	+/-7.88	14.0		pCi/L					
Lead-210	U	-112	+/-1100	1720		pCi/L					
Lead-212	U	-12.2	+/-8.94	12.5		pCi/L					
Lead-214	U	10.2	+/-11.3	16.4		pCi/L					
Manganese-54	U	1.27	+/-4.24	6.71		pCi/L					
Mercury-203	U	4.86	+/-5.05	7.61		pCi/L					
Neodymium-147	U	77.5	+/-91.8	179		pCi/L					
Neptunium-239	U	-10	+/-33.4	57.4		pCi/L					
Niobium-94	U	-1.03	+/-4.22	6.37		pCi/L					
Niobium-95	U	-5.09	+/-6.05	8.60		pCi/L					
Potassium-40	U	-0.92	+/-45.4	79.0		pCi/L					
Promethium-144	U	3.65	+/-4.06	7.84		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	341588011	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.74	+/-4.43	7.68	pCi/L
Radium-228	U	14.8	+/-18.3	33.8	pCi/L
Ruthenium-106	U	10.8	+/-34.7	64.8	pCi/L
Silver-110m	U	0.621	+/-3.65	6.75	pCi/L
Sodium-22	U	-1.03	+/-3.47	6.41	pCi/L
Thallium-208	U	4.83	+/-7.48	6.81	pCi/L
Thorium-230	U	2670	+/-3030	2980	pCi/L
Thorium-234	U	331	+/-361	491	pCi/L
Tin-113	U	1.31	+/-5.77	9.36	pCi/L
Uranium-235	U	2.71	+/-27.4	39.1	pCi/L
Uranium-238	U	331	+/-361	491	pCi/L
Yttrium-88	U	0.908	+/-4.26	8.68	pCi/L
Zinc-65	U	0.219	+/-11.6	17.3	pCi/L
Zirconium-95	U	5.34	+/-8.40	14.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.0669	+/-1.62	3.31	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-2.81	+/-2.65	4.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	153	+/-134	222	300	pCi/L	MYM1	01/28/14	1232	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	341588012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 12:15		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.8	+/-15.2	26.1		pCi/L		RXF2	01/27/14	1400 1361916	1
Americium-241	U	2.75	+/-23.7	37.0		pCi/L					
Antimony-124	U	-1.97	+/-7.69	14.5		pCi/L					
Antimony-125	U	-7.08	+/-8.52	14.7		pCi/L					
Barium-133	U	-2.44	+/-4.87	7.03		pCi/L					
Barium-140	U	1.41	+/-7.74	15.3		pCi/L					
Beryllium-7	U	-28	+/-31.7	54.0		pCi/L					
Bismuth-212	U	-31.7	+/-53.7	84.1		pCi/L					
Bismuth-214	U	6.48	+/-10.2	15.2		pCi/L					
Cerium-139	U	1.05	+/-3.05	5.54		pCi/L					
Cerium-141	U	2.46	+/-5.86	10.7		pCi/L					
Cerium-144	U	-13.5	+/-23.4	35.7		pCi/L					
Cesium-134	U	2.05	+/-4.19	6.98		pCi/L					
Cesium-136	U	-3.31	+/-7.10	12.7		pCi/L					
Cesium-137	U	-4.19	+/-4.70	7.15	10.0	pCi/L					
Chromium-51	U	-33.7	+/-40.6	57.1		pCi/L					
Cobalt-56	U	1.24	+/-3.76	6.96		pCi/L					
Cobalt-57	U	2.92	+/-2.69	4.82		pCi/L					
Cobalt-58	U	-1.68	+/-3.54	6.05		pCi/L					
Cobalt-60	U	-0.113	+/-3.57	6.63		pCi/L					
Europium-152	U	2.22	+/-9.91	17.6		pCi/L					
Europium-154	U	-1.03	+/-10.2	18.8		pCi/L					
Europium-155	U	1.71	+/-10.9	18.7		pCi/L					
Iridium-192	U	3.59	+/-3.29	6.00		pCi/L					
Iron-59	U	1.05	+/-7.42	14.1		pCi/L					
Lead-210	U	-951	+/-757	1090		pCi/L					
Lead-212	U	8.85	+/-9.53	12.9		pCi/L					
Lead-214	U	8.05	+/-13.7	16.1		pCi/L					
Manganese-54	U	-2.15	+/-3.09	5.12		pCi/L					
Mercury-203	U	3.28	+/-3.68	6.83		pCi/L					
Neodymium-147	U	-6.3	+/-43.5	78.9		pCi/L					
Neptunium-239	U	5.90	+/-29.0	49.6		pCi/L					
Niobium-94	U	-1.01	+/-3.40	5.94		pCi/L					
Niobium-95	U	1.65	+/-3.46	6.55		pCi/L					
Potassium-40	U	52.5	+/-62.9	60.4		pCi/L					
Promethium-144	U	-2.41	+/-5.16	6.48		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 22 Project: WNUC00124  
Sample ID: 341588012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.328	+/-3.96	7.31	pCi/L
Radium-228	U	-11.8	+/-15.2	26.1	pCi/L
Ruthenium-106	U	-25.9	+/-28.9	48.1	pCi/L
Silver-110m	U	-3.08	+/-3.35	5.55	pCi/L
Sodium-22	U	-0.572	+/-3.64	6.65	pCi/L
Thallium-208	U	1.16	+/-4.81	7.17	pCi/L
Thorium-230	U	-391	+/-1490	2260	pCi/L
Thorium-234	U	173	+/-241	285	pCi/L
Tin-113	U	-2.13	+/-4.42	7.41	pCi/L
Uranium-235	U	-27.3	+/-22.5	35.6	pCi/L
Uranium-238	U	173	+/-241	285	pCi/L
Yttrium-88	U	1.18	+/-3.73	7.66	pCi/L
Zinc-65	U	1.40	+/-8.65	12.9	pCi/L
Zirconium-95	U	2.58	+/-6.15	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	11.9	+/-4.39	4.94	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	52.1	+/-4.21	2.52	5.00	pCi/L					
Alpha	8.63	+/-3.86	4.98	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta	56.7	+/-4.45	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	179	+/-134	220	300	pCi/L	MYM1	01/31/14	1206	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 22  
Sample ID: 341588012

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 341588013  
Matrix: Ground Water  
Collect Date: 15-JAN-14 14:05  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.01	+/-14.6	23.1		pCi/L		RXF2	01/27/14	1400 1361916	1
Americium-241	U	2.38	+/-18.4	28.8		pCi/L					
Antimony-124	U	4.38	+/-7.15	15.4		pCi/L					
Antimony-125	U	-0.521	+/-9.08	16.1		pCi/L					
Barium-133	U	1.60	+/-4.55	7.35		pCi/L					
Barium-140	U	0.0104	+/-6.16	11.6		pCi/L					
Beryllium-7	U	14.2	+/-31.6	57.6		pCi/L					
Bismuth-212	U	-1.52	+/-44.2	81.9		pCi/L					
Bismuth-214	U	3.25	+/-9.16	14.4		pCi/L					
Cerium-139	U	-1.35	+/-3.02	4.97		pCi/L					
Cerium-141	U	2.75	+/-7.06	10.9		pCi/L					
Cerium-144	U	-8.2	+/-20.2	33.6		pCi/L					
Cesium-134	U	2.11	+/-3.23	6.39		pCi/L					
Cesium-136	U	-0.526	+/-7.22	13.3		pCi/L					
Cesium-137	U	2.10	+/-3.52	6.51	10.0	pCi/L					
Chromium-51	U	17.7	+/-33.0	60.9		pCi/L					
Cobalt-56	U	-0.336	+/-3.47	6.37		pCi/L					
Cobalt-57	U	-1.26	+/-2.58	4.28		pCi/L					
Cobalt-58	U	-3.3	+/-3.13	5.22		pCi/L					
Cobalt-60	U	2.09	+/-3.37	6.74		pCi/L					
Europium-152	U	-0.995	+/-8.92	15.9		pCi/L					
Europium-154	U	-9.96	+/-11.7	15.7		pCi/L					
Europium-155	U	-0.19	+/-10.6	18.1		pCi/L					
Iridium-192	U	1.50	+/-3.34	6.12		pCi/L					
Iron-59	U	0.396	+/-7.28	13.5		pCi/L					
Lead-210	U	162	+/-762	738		pCi/L					
Lead-212	U	0.223	+/-8.33	11.1		pCi/L					
Lead-214	U	3.76	+/-11.2	15.1		pCi/L					
Manganese-54	U	-1.33	+/-2.91	5.19		pCi/L					
Mercury-203	U	-1.82	+/-3.54	6.16		pCi/L					
Neodymium-147	U	-27.1	+/-41.7	69.9		pCi/L					
Neptunium-239	U	-26.1	+/-28.0	45.4		pCi/L					
Niobium-94	U	-0.825	+/-3.40	5.81		pCi/L					
Niobium-95	U	-2.07	+/-2.97	5.18		pCi/L					
Potassium-40	U	20.7	+/-65.9	60.0		pCi/L					
Promethium-144	U	3.55	+/-3.18	6.13		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 341588013

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.250	+/-3.91	7.00	pCi/L
Radium-228	U	-7.01	+/-14.6	23.1	pCi/L
Ruthenium-106	U	-14.6	+/-30.1	50.8	pCi/L
Silver-110m	U	-2.43	+/-3.37	5.53	pCi/L
Sodium-22	U	-3.51	+/-4.14	5.54	pCi/L
Thallium-208	U	0.205	+/-6.23	5.03	pCi/L
Thorium-230	U	246	+/-1270	1990	pCi/L
Thorium-234	U	105	+/-292	281	pCi/L
Tin-113	U	1.88	+/-4.08	7.51	pCi/L
Uranium-235	U	26.8	+/-33.8	38.8	pCi/L
Uranium-238	U	105	+/-292	281	pCi/L
Yttrium-88	U	2.30	+/-2.70	6.35	pCi/L
Zinc-65	U	-0.131	+/-7.66	12.8	pCi/L
Zirconium-95	U	-0.801	+/-5.34	9.88	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.712	+/-2.60	4.99	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-1.17	+/-1.85	3.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.6	+/-136	232	300	pCi/L	MYM1	01/28/14	1304	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 24	Project:	WNUC00124
Sample ID:	341588014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 11:26		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.76	+/-17.9	26.3		pCi/L		RXF2	02/04/14	0836 1361916	1
Americium-241	U	-6.41	+/-13.6	22.8		pCi/L					
Antimony-124	U	-4.24	+/-10.2	18.1		pCi/L					
Antimony-125	U	-5.63	+/-8.53	14.1		pCi/L					
Barium-133	U	1.45	+/-4.46	7.09		pCi/L					
Barium-140	U	-4.39	+/-13.5	20.5		pCi/L					
Beryllium-7	U	15.4	+/-32.3	59.0		pCi/L					
Bismuth-212	U	28.4	+/-45.0	87.0		pCi/L					
Bismuth-214	U	5.97	+/-10.3	11.0		pCi/L					
Cerium-139	U	-0.828	+/-2.70	4.77		pCi/L					
Cerium-141	U	-2.01	+/-6.55	11.2		pCi/L					
Cerium-144	U	0.737	+/-18.0	32.6		pCi/L					
Cesium-134	U	-1.08	+/-3.11	5.52		pCi/L					
Cesium-136	U	7.25	+/-7.84	21.2		pCi/L					
Cesium-137	U	-4.09	+/-4.24	6.69	10.0	pCi/L					
Chromium-51	U	28.0	+/-41.9	77.1		pCi/L					
Cobalt-56	U	0.0941	+/-3.64	6.67		pCi/L					
Cobalt-57	U	-0.563	+/-2.23	3.99		pCi/L					
Cobalt-58	U	1.20	+/-4.03	6.70		pCi/L					
Cobalt-60	U	-2.19	+/-3.64	6.45		pCi/L					
Europium-152	U	5.24	+/-9.45	16.7		pCi/L					
Europium-154	U	-1.36	+/-9.51	15.4		pCi/L					
Europium-155	U	1.76	+/-9.44	16.2		pCi/L					
Iridium-192	U	-1.49	+/-3.60	6.16		pCi/L					
Iron-59	U	-5.14	+/-7.50	12.4		pCi/L					
Lead-210	U	-91.2	+/-318	485		pCi/L					
Lead-212	U	0.848	+/-8.03	10.3		pCi/L					
Lead-214	U	1.14	+/-9.77	14.1		pCi/L					
Manganese-54	U	2.14	+/-3.28	6.35		pCi/L					
Mercury-203	U	-1.71	+/-3.78	6.49		pCi/L					
Neodymium-147	U	88.7	+/-75.6	150		pCi/L					
Neptunium-239	U	8.07	+/-22.7	42.0		pCi/L					
Niobium-94	U	-1.48	+/-2.99	5.22		pCi/L					
Niobium-95	U	-0.333	+/-3.71	6.74		pCi/L					
Potassium-40	U	31.2	+/-43.7	64.5		pCi/L					
Promethium-144	U	2.50	+/-3.02	5.93		pCi/L					

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 24

Sample ID: 341588014

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.33	+/-3.93	7.08	pCi/L
Radium-228	U	3.76	+/-17.9	26.3	pCi/L
Ruthenium-106	U	6.90	+/-28.3	53.2	pCi/L
Silver-110m	U	-2.54	+/-3.09	5.25	pCi/L
Sodium-22	U	-0.381	+/-3.38	5.51	pCi/L
Thallium-208	U	1.14	+/-4.04	6.70	pCi/L
Thorium-230	U	-592	+/-898	1480	pCi/L
Thorium-234	U	-16.2	+/-140	229	pCi/L
Tin-113	U	0.304	+/-4.43	7.82	pCi/L
Uranium-235	U	-2.93	+/-23.0	33.2	pCi/L
Uranium-238	U	-16.2	+/-140	229	pCi/L
Yttrium-88	U	0.502	+/-4.29	8.32	pCi/L
Zinc-65	U	-2.99	+/-7.23	10.5	pCi/L
Zirconium-95	U	5.25	+/-4.78	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.30	+/-2.64	4.81	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-0.132	+/-1.76	3.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	24.9	+/-130	226	300	pCi/L	MYM1	01/28/14	1320	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.2	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 26  
Sample ID: 341588015  
Matrix: Ground Water  
Collect Date: 13-JAN-14 10:21  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.12	+/-17.6	25.3		pCi/L		RXF2	02/04/14	0837 1361916	1
Americium-241	U	7.46	+/-21.3	36.0		pCi/L					
Antimony-124	U	-2.93	+/-11.5	21.1		pCi/L					
Antimony-125	U	-3.67	+/-8.74	15.2		pCi/L					
Barium-133	U	1.27	+/-4.57	7.51		pCi/L					
Barium-140	U	-6.39	+/-11.3	20.0		pCi/L					
Beryllium-7	U	2.22	+/-33.3	60.4		pCi/L					
Bismuth-212	U	-26.9	+/-37.5	65.4		pCi/L					
Bismuth-214	U	8.56	+/-12.3	13.2		pCi/L					
Cerium-139	U	0.402	+/-3.15	4.95		pCi/L					
Cerium-141	U	-12.4	+/-7.11	11.1		pCi/L					
Cerium-144	U	-3.08	+/-17.9	31.2		pCi/L					
Cesium-134	U	1.76	+/-3.81	7.41		pCi/L					
Cesium-136	U	-0.962	+/-13.1	24.1		pCi/L					
Cesium-137	U	1.11	+/-3.66	6.69	10.0	pCi/L					
Chromium-51	U	21.8	+/-39.6	75.2		pCi/L					
Cobalt-56	U	-0.867	+/-3.59	6.55		pCi/L					
Cobalt-57	U	-1.57	+/-2.59	4.40		pCi/L					
Cobalt-58	U	2.67	+/-3.88	6.44		pCi/L					
Cobalt-60	U	1.70	+/-3.40	7.04		pCi/L					
Europium-152	U	2.63	+/-9.57	17.7		pCi/L					
Europium-154	U	-4.67	+/-11.4	16.5		pCi/L					
Europium-155	U	-1.53	+/-9.59	16.9		pCi/L					
Iridium-192	U	0.641	+/-3.38	6.27		pCi/L					
Iron-59	U	11.9	+/-14.3	16.6		pCi/L					
Lead-210	U	173	+/-656	1230		pCi/L					
Lead-212	U	6.22	+/-8.86	11.8		pCi/L					
Lead-214	UI	0.00	+/-16.6	14.7		pCi/L					
Manganese-54	U	1.26	+/-3.20	6.24		pCi/L					
Mercury-203	U	3.26	+/-5.15	6.72		pCi/L					
Neodymium-147	U	-21	+/-84.4	148		pCi/L					
Neptunium-239	U	-1.12	+/-27.0	42.8		pCi/L					
Niobium-94	U	-0.74	+/-2.97	5.43		pCi/L					
Niobium-95	U	-1.83	+/-4.79	7.83		pCi/L					
Potassium-40	U	11.9	+/-51.7	95.0		pCi/L					
Promethium-144	U	0.479	+/-3.15	5.98		pCi/L					



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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 26 Project: WNUC00124  
Sample ID: 341588015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.65	+/-4.17	7.24	pCi/L
Radium-228	U	-4.12	+/-17.6	25.3	pCi/L
Ruthenium-106	U	-25.3	+/-30.8	49.9	pCi/L
Silver-110m	U	1.27	+/-3.33	6.17	pCi/L
Sodium-22	U	-1.6	+/-4.03	5.87	pCi/L
Thallium-208	U	-3.97	+/-4.12	6.59	pCi/L
Thorium-230	U	-1350	+/-1550	2330	pCi/L
Thorium-234	U	64.0	+/-295	378	pCi/L
Tin-113	U	-2.9	+/-4.38	7.51	pCi/L
Uranium-235	U	-9.55	+/-22.6	36.9	pCi/L
Uranium-238	U	64.0	+/-295	378	pCi/L
Yttrium-88	U	0.960	+/-4.13	8.39	pCi/L
Zinc-65	U	-3.17	+/-7.80	11.5	pCi/L
Zirconium-95	U	-0.302	+/-6.08	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.529	+/-2.41	4.72	5.00	pCi/L	JAOC	01/31/14	1314	1362035	2
Beta		17.4	+/-3.80	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	160	+/-148	246	300	pCi/L	MYM1	01/28/14	1337	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			85.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 27  
Sample ID: 341588016  
Matrix: Ground Water  
Collect Date: 13-JAN-14 14:29  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.32	+/-16.2	29.2		pCi/L		RXF2	01/27/14	1401 1361916	1
Americium-241	U	10.5	+/-27.6	50.7		pCi/L					
Antimony-124	U	3.83	+/-9.26	19.7		pCi/L					
Antimony-125	U	-9.04	+/-10.1	16.8		pCi/L					
Barium-133	U	3.08	+/-4.70	8.06		pCi/L					
Barium-140	U	-10.7	+/-9.85	15.7		pCi/L					
Beryllium-7	U	18.5	+/-34.0	64.1		pCi/L					
Bismuth-212	U	0.885	+/-47.9	90.5		pCi/L					
Bismuth-214	U	15.5	+/-9.25	16.8		pCi/L					
Cerium-139	U	-3.67	+/-3.31	5.28		pCi/L					
Cerium-141	UI	0.00	+/-13.0	10.7		pCi/L					
Cerium-144	U	-4.6	+/-22.4	38.4		pCi/L					
Cesium-134	U	-2.93	+/-3.52	5.99		pCi/L					
Cesium-136	U	-6.97	+/-9.99	16.9		pCi/L					
Cesium-137	U	0.845	+/-3.73	6.85	10.0	pCi/L					
Chromium-51	U	-26.7	+/-40.2	69.4		pCi/L					
Cobalt-56	U	-0.00894	+/-4.11	7.67		pCi/L					
Cobalt-57	U	2.18	+/-2.78	5.07		pCi/L					
Cobalt-58	U	-1.6	+/-3.61	6.47		pCi/L					
Cobalt-60	U	0.996	+/-3.57	7.09		pCi/L					
Europium-152	U	6.30	+/-10.4	19.7		pCi/L					
Europium-154	U	-6.2	+/-12.4	21.2		pCi/L					
Europium-155	U	7.83	+/-11.3	20.8		pCi/L					
Iridium-192	U	0.335	+/-3.73	6.80		pCi/L					
Iron-59	U	3.25	+/-7.71	15.4		pCi/L					
Lead-210	U	524	+/-2200	1790		pCi/L					
Lead-212	U	6.04	+/-12.4	13.4		pCi/L					
Lead-214	U	6.44	+/-14.5	16.5		pCi/L					
Manganese-54	U	0.604	+/-3.32	6.39		pCi/L					
Mercury-203	U	-2.41	+/-4.00	6.99		pCi/L					
Neodymium-147	U	-1.41	+/-52.3	94.2		pCi/L					
Neptunium-239	U	2.23	+/-30.3	53.1		pCi/L					
Niobium-94	U	-1.69	+/-3.81	5.84		pCi/L					
Niobium-95	U	4.13	+/-3.83	7.96		pCi/L					
Potassium-40	U	-27.2	+/-50.3	90.7		pCi/L					
Promethium-144	U	2.34	+/-3.62	7.13		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 27 Project: WNUC00124  
Sample ID: 341588016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.14	+/-4.29	7.57	pCi/L
Radium-228	U	-2.32	+/-16.2	29.2	pCi/L
Ruthenium-106	U	19.0	+/-34.5	64.9	pCi/L
Silver-110m	U	0.681	+/-3.57	6.52	pCi/L
Sodium-22	U	-2.25	+/-4.35	7.45	pCi/L
Thallium-208	U	1.60	+/-6.75	6.67	pCi/L
Thorium-230	U	-1150	+/-1500	2570	pCi/L
Thorium-234	U	-106	+/-267	393	pCi/L
Tin-113	U	0.0615	+/-4.48	8.14	pCi/L
Uranium-235	UI	0.00	+/-42.3	35.0	pCi/L
Uranium-238	U	-106	+/-267	393	pCi/L
Yttrium-88	U	0.338	+/-4.74	9.35	pCi/L
Zinc-65	U	1.21	+/-8.68	16.3	pCi/L
Zirconium-95	U	0.828	+/-7.10	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.67	+/-2.83	4.98	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		11.6	+/-2.83	3.11	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.6	+/-111	190	300	pCi/L	MYM1	01/31/14	1026	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			102	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	341588017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 13:50		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.5	+/-18.3	31.0		pCi/L		RXF2	01/28/14	0847 1361916	1
Americium-241	U	-3.06	+/-28.9	51.9		pCi/L					
Antimony-124	U	-4.29	+/-8.58	15.4		pCi/L					
Antimony-125	U	-2.12	+/-8.92	15.8		pCi/L					
Barium-133	U	-1.44	+/-5.34	8.22		pCi/L					
Barium-140	U	-3.67	+/-8.16	14.8		pCi/L					
Beryllium-7	U	20.6	+/-36.2	68.0		pCi/L					
Bismuth-212	U	5.57	+/-50.8	96.3		pCi/L					
Bismuth-214	U	10.6	+/-14.1	16.5		pCi/L					
Cerium-139	U	0.308	+/-3.17	5.50		pCi/L					
Cerium-141	U	-1.26	+/-7.87	11.4		pCi/L					
Cerium-144	U	-6.28	+/-19.8	33.9		pCi/L					
Cesium-134	U	1.11	+/-3.85	7.49		pCi/L					
Cesium-136	U	-4.23	+/-11.5	17.1		pCi/L					
Cesium-137	U	1.06	+/-4.39	6.40	10.0	pCi/L					
Chromium-51	U	-17.4	+/-39.6	69.5		pCi/L					
Cobalt-56	U	3.36	+/-3.73	7.76		pCi/L					
Cobalt-57	U	0.800	+/-2.60	4.66		pCi/L					
Cobalt-58	U	1.64	+/-3.61	7.20		pCi/L					
Cobalt-60	U	4.42	+/-4.08	8.55		pCi/L					
Europium-152	U	-6.25	+/-9.47	16.3		pCi/L					
Europium-154	U	-1.1	+/-9.64	18.0		pCi/L					
Europium-155	U	2.69	+/-10.5	19.0		pCi/L					
Iridium-192	U	-0.292	+/-3.63	6.57		pCi/L					
Iron-59	U	-3.76	+/-9.46	14.0		pCi/L					
Lead-210	UI	0.00	+/-2910	2090		pCi/L					
Lead-212	U	-1.03	+/-7.90	12.8		pCi/L					
Lead-214	U	2.92	+/-15.5	16.1		pCi/L					
Manganese-54	U	-1.36	+/-3.33	5.95		pCi/L					
Mercury-203	U	-1.92	+/-3.89	6.85		pCi/L					
Neodymium-147	U	34.3	+/-57.5	106		pCi/L					
Neptunium-239	U	18.0	+/-26.7	49.2		pCi/L					
Niobium-94	U	-3.54	+/-3.38	5.63		pCi/L					
Niobium-95	U	0.214	+/-3.90	7.35		pCi/L					
Potassium-40	UI	0.00	+/-67.6	63.5		pCi/L					
Promethium-144	U	-1.25	+/-3.92	7.06		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	341588017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.5	+/-4.14	7.24	pCi/L
Radium-228	U	12.5	+/-18.3	31.0	pCi/L
Ruthenium-106	U	8.18	+/-33.3	61.2	pCi/L
Silver-110m	U	-3.73	+/-3.98	5.58	pCi/L
Sodium-22	U	0.0486	+/-3.24	6.39	pCi/L
Thallium-208	U	-4.95	+/-5.62	7.94	pCi/L
Thorium-230	U	-1830	+/-1910	2930	pCi/L
Thorium-234	U	-56.9	+/-260	429	pCi/L
Tin-113	U	3.83	+/-4.46	8.69	pCi/L
Uranium-235	U	-5.72	+/-25.2	36.4	pCi/L
Uranium-238	U	-56.9	+/-260	429	pCi/L
Yttrium-88	U	0.295	+/-5.11	9.96	pCi/L
Zinc-65	U	0.802	+/-7.88	14.9	pCi/L
Zirconium-95	U	-5.32	+/-6.65	11.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	11.6	+/-4.22	4.99	5.00	pCi/L	JAOC	02/02/14	1748	1362036	2
Beta	27.6	+/-3.08	2.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-63.5	+/-110	198	300	pCi/L	MYM1	01/31/14	1043	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	341588018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 11:37		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.87	+/-20.6	36.1		pCi/L		RXF2	02/04/14	0854 1361916	1
Americium-241	U	-0.667	+/-6.34	10.5		pCi/L					
Antimony-124	U	1.50	+/-13.7	23.8		pCi/L					
Antimony-125	U	-2.2	+/-10.1	18.1		pCi/L					
Barium-133	U	4.86	+/-5.39	9.45		pCi/L					
Barium-140	U	-5.46	+/-15.8	29.1		pCi/L					
Beryllium-7	U	-19.5	+/-38.6	66.9		pCi/L					
Bismuth-212	U	6.64	+/-57.6	110		pCi/L					
Bismuth-214		21.8	+/-15.7	13.5		pCi/L					
Cerium-139	U	-0.974	+/-2.91	5.03		pCi/L					
Cerium-141	U	-7.14	+/-7.65	11.5		pCi/L					
Cerium-144	U	2.91	+/-19.3	31.4		pCi/L					
Cesium-134	U	-3.29	+/-5.04	8.79		pCi/L					
Cesium-136	U	1.70	+/-17.1	32.4		pCi/L					
Cesium-137	U	1.80	+/-4.37	8.22	10.0	pCi/L					
Chromium-51	U	-8.62	+/-48.7	78.0		pCi/L					
Cobalt-56	U	1.28	+/-4.78	9.27		pCi/L					
Cobalt-57	U	1.28	+/-2.38	4.00		pCi/L					
Cobalt-58	U	0.363	+/-4.85	9.21		pCi/L					
Cobalt-60	U	2.51	+/-4.38	9.28		pCi/L					
Europium-152	U	-1.29	+/-9.41	17.2		pCi/L					
Europium-154	U	-1.46	+/-11.8	22.0		pCi/L					
Europium-155	U	0.961	+/-8.79	15.9		pCi/L					
Iridium-192	U	-1.5	+/-3.95	6.85		pCi/L					
Iron-59	U	4.60	+/-11.5	22.5		pCi/L					
Lead-210	U	-53.9	+/-89.3	145		pCi/L					
Lead-212	U	-5.97	+/-9.01	13.4		pCi/L					
Lead-214	U	6.84	+/-13.7	18.6		pCi/L					
Manganese-54	U	-2.22	+/-4.06	7.16		pCi/L					
Mercury-203	U	-0.251	+/-4.77	8.15		pCi/L					
Neodymium-147	U	-19.8	+/-97.8	173		pCi/L					
Neptunium-239	U	-1.01	+/-23.4	41.8		pCi/L					
Niobium-94	U	-4.07	+/-4.27	6.75		pCi/L					
Niobium-95	U	2.38	+/-4.82	9.56		pCi/L					
Potassium-40	U	3.85	+/-62.1	81.6		pCi/L					
Promethium-144	U	4.02	+/-4.31	8.42		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 29

Sample ID: 341588018

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.655	+/-4.93	8.86	pCi/L
Radium-228	U	-3.87	+/-20.6	36.1	pCi/L
Ruthenium-106	U	-15.8	+/-33.8	57.9	pCi/L
Silver-110m	U	-0.476	+/-4.03	7.16	pCi/L
Sodium-22	U	-0.547	+/-4.18	7.75	pCi/L
Thallium-208	U	-2.17	+/-5.43	9.37	pCi/L
Thorium-230	U	445	+/-522	994	pCi/L
Thorium-234	U	-51.2	+/-83.3	131	pCi/L
Tin-113	U	3.37	+/-4.98	9.61	pCi/L
Uranium-235	U	-14.6	+/-23.2	32.9	pCi/L
Uranium-238	U	-51.2	+/-83.3	131	pCi/L
Yttrium-88	U	-0.52	+/-5.00	9.79	pCi/L
Zinc-65	U	-0.145	+/-10.7	19.7	pCi/L
Zirconium-95	U	-0.102	+/-8.02	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.359	+/-2.40	4.91	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		13.1	+/-2.46	2.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	9.72	+/-110	192	300	pCi/L	MYM1	01/31/14	1100	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 11:58		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		12.0	+/-1.99	0.519	1.00	pCi/L		MXS2	02/08/14	1257	1364996	1
Uranium-235/236		0.631	+/-0.547	0.315	1.00	pCi/L						
Uranium-238		2.19	+/-0.887	0.596	1.00	pCi/L						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	2.20	+/-16.7	23.4		pCi/L		RXF2	02/04/14	0855	1361916	2
Americium-241	U	3.67	+/-18.3	28.9		pCi/L						
Antimony-124	U	1.59	+/-7.84	16.0		pCi/L						
Antimony-125	U	-3.25	+/-8.18	14.2		pCi/L						
Barium-133	U	0.677	+/-4.32	6.89		pCi/L						
Barium-140	U	-4.3	+/-9.17	16.0		pCi/L						
Beryllium-7	U	-13.9	+/-38.2	59.9		pCi/L						
Bismuth-212	U	38.4	+/-42.8	85.5		pCi/L						
Bismuth-214	U	-4.42	+/-8.36	12.9		pCi/L						
Cerium-139	U	0.537	+/-3.22	5.48		pCi/L						
Cerium-141	U	6.03	+/-7.14	12.6		pCi/L						
Cerium-144	U	8.35	+/-20.0	34.7		pCi/L						
Cesium-134	U	0.511	+/-3.34	5.61		pCi/L						
Cesium-136	U	3.47	+/-11.5	22.1		pCi/L						
Cesium-137	U	1.84	+/-3.47	5.79	10.0	pCi/L						
Chromium-51	U	25.3	+/-42.1	77.8		pCi/L						
Cobalt-56	U	-1.18	+/-3.35	6.04		pCi/L						
Cobalt-57	U	-1.95	+/-2.74	4.49		pCi/L						
Cobalt-58	U	-2.12	+/-4.04	6.06		pCi/L						
Cobalt-60	U	0.914	+/-2.97	5.84		pCi/L						
Europium-152	U	-6.67	+/-11.0	16.3		pCi/L						
Europium-154	U	-4.13	+/-11.1	15.4		pCi/L						
Europium-155	U	-1.87	+/-10.4	17.6		pCi/L						
Iridium-192	U	-2.18	+/-3.79	5.66		pCi/L						
Iron-59	U	-4.61	+/-6.80	11.6		pCi/L						
Lead-210	U	103	+/-646	733		pCi/L						
Lead-212	U	5.29	+/-8.22	11.4		pCi/L						
Lead-214	U	6.00	+/-11.2	14.7		pCi/L						
Manganese-54	U	1.93	+/-2.85	5.68		pCi/L						
Mercury-203	U	2.36	+/-4.09	7.54		pCi/L						
Neodymium-147	U	-12.9	+/-70.9	124		pCi/L						



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	-14.4	+/-26.3	43.5	pCi/L
Niobium-94	U	-0.613	+/-3.10	5.33	pCi/L
Niobium-95	U	3.22	+/-3.74	7.43	pCi/L
Potassium-40	U	31.8	+/-58.5	50.2	pCi/L
Promethium-144	U	1.02	+/-3.29	5.93	pCi/L
Promethium-146	U	1.08	+/-3.71	6.79	pCi/L
Radium-228	U	2.20	+/-16.7	23.4	pCi/L
Ruthenium-106	U	-47	+/-31.1	47.0	pCi/L
Silver-110m	U	2.61	+/-4.20	5.76	pCi/L
Sodium-22	U	-1.51	+/-3.91	5.42	pCi/L
Thallium-208	U	-5.58	+/-5.09	6.52	pCi/L
Thorium-230	U	-688	+/-1310	1960	pCi/L
Thorium-234	U	84.3	+/-273	295	pCi/L
Tin-113	U	4.81	+/-4.27	8.20	pCi/L
Uranium-235	U	-8.64	+/-25.8	36.2	pCi/L
Uranium-238	U	84.3	+/-273	295	pCi/L
Yttrium-88	U	4.74	+/-2.58	7.38	pCi/L
Zinc-65	U	5.27	+/-7.00	14.0	pCi/L
Zirconium-95	U	-2.13	+/-6.79	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	18.5	+/-6.30	4.89	5.00	pCi/L	JAOC	02/02/14	1748	1362036	3
Beta	35.3	+/-4.17	2.77	5.00	pCi/L					
Alpha	13.0	+/-4.00	4.96	5.00	pCi/L	JAOC	02/04/14	1648	1362036	4
Beta	42.3	+/-3.36	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	98.0	+/-118	198	300	pCi/L	MYM1	01/31/14	1116	1361891	5
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# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			85.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32  
Sample ID: 341588020  
Matrix: Ground Water  
Collect Date: 14-JAN-14 15:16  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	9.04	+/-14.7	22.8		pCi/L		RXF2	01/28/14	0842 1361916	1
Americium-241	U	-7.44	+/-11.3	18.6		pCi/L					
Antimony-124	U	-5.98	+/-9.17	12.5		pCi/L					
Antimony-125	U	-3.26	+/-8.58	14.5		pCi/L					
Barium-133	U	-0.049	+/-4.33	6.64		pCi/L					
Barium-140	U	1.18	+/-9.23	15.5		pCi/L					
Beryllium-7	U	-6.22	+/-28.7	52.1		pCi/L					
Bismuth-212	U	-14.4	+/-51.1	80.8		pCi/L					
Bismuth-214	UI	0.00	+/-12.2	14.6		pCi/L					
Cerium-139	U	-1.78	+/-2.61	4.49		pCi/L					
Cerium-141	U	8.82	+/-5.20	9.88		pCi/L					
Cerium-144	U	-8.7	+/-17.6	29.7		pCi/L					
Cesium-134	U	2.46	+/-3.59	6.55		pCi/L					
Cesium-136	U	-1.05	+/-7.47	13.5		pCi/L					
Cesium-137	U	-0.628	+/-3.07	5.55	10.0	pCi/L					
Chromium-51	U	16.8	+/-35.2	63.7		pCi/L					
Cobalt-56	U	1.94	+/-3.36	6.53		pCi/L					
Cobalt-57	U	0.753	+/-2.17	3.99		pCi/L					
Cobalt-58	U	-2.44	+/-3.62	5.39		pCi/L					
Cobalt-60	U	-0.399	+/-3.25	6.12		pCi/L					
Europium-152	U	-5.11	+/-10.4	15.2		pCi/L					
Europium-154	U	6.77	+/-8.21	17.2		pCi/L					
Europium-155	U	1.45	+/-10.1	16.3		pCi/L					
Iridium-192	U	0.609	+/-3.31	5.90		pCi/L					
Iron-59	U	-3.72	+/-6.74	11.4		pCi/L					
Lead-210	U	-87.6	+/-275	420		pCi/L					
Lead-212	U	5.06	+/-10.4	8.59		pCi/L					
Lead-214	U	5.72	+/-11.8	14.5		pCi/L					
Manganese-54	U	-2.74	+/-3.03	4.97		pCi/L					
Mercury-203	U	1.85	+/-3.26	5.99		pCi/L					
Neodymium-147	U	-37.6	+/-43.9	75.2		pCi/L					
Neptunium-239	U	9.04	+/-23.4	43.0		pCi/L					
Niobium-94	U	-1.86	+/-2.76	4.72		pCi/L					
Niobium-95	U	-2.21	+/-3.46	5.91		pCi/L					
Potassium-40	U	28.1	+/-45.0	49.5		pCi/L					
Promethium-144	U	1.54	+/-2.96	5.11		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	341588020	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.771	+/-3.63	6.26	pCi/L
Radium-228	U	9.04	+/-14.7	22.8	pCi/L
Ruthenium-106	U	-5.24	+/-25.8	46.7	pCi/L
Silver-110m	U	-0.50	+/-2.77	5.03	pCi/L
Sodium-22	U	2.12	+/-2.96	6.09	pCi/L
Thallium-208	U	-2.36	+/-4.21	6.02	pCi/L
Thorium-230	U	-818	+/-1060	1550	pCi/L
Thorium-234	U	-98.6	+/-128	216	pCi/L
Tin-113	U	-0.572	+/-3.85	6.69	pCi/L
Uranium-235	U	-6.92	+/-20.0	30.8	pCi/L
Uranium-238	U	-98.6	+/-128	216	pCi/L
Yttrium-88	U	-1.89	+/-3.63	6.34	pCi/L
Zinc-65	U	2.33	+/-6.48	12.4	pCi/L
Zirconium-95	U	-2.23	+/-5.86	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.751	+/-2.51	4.97	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		250	+/-7.78	3.94	5.00	pCi/L					
Alpha		9.78	+/-5.13	4.98	5.00	pCi/L	JAOC	02/04/14	1648	1362036	3
Beta		223	+/-7.17	2.09	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	381	+/-130	198	300	pCi/L	MYM1	01/31/14	1133	1361891	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32  
Sample ID: 341588020

Project: WNUC00124  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 341588021  
Matrix: Ground Water  
Collect Date: 15-JAN-14 11:19  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.69	+/-16.1	28.5		pCi/L		RXF2	01/24/14	1449 1361919	1
Americium-241	U	-12.7	+/-21.4	37.6		pCi/L					
Antimony-124	U	-0.823	+/-7.13	13.9		pCi/L					
Antimony-125	U	3.25	+/-8.56	16.0		pCi/L					
Barium-133	U	0.929	+/-4.08	6.74		pCi/L					
Barium-140	U	0.253	+/-6.51	12.6		pCi/L					
Beryllium-7	U	2.71	+/-27.4	50.0		pCi/L					
Bismuth-212	U	-9.25	+/-53.8	83.4		pCi/L					
Bismuth-214		20.8	+/-12.4	11.6		pCi/L					
Cerium-139	U	-2.0	+/-3.11	4.55		pCi/L					
Cerium-141	U	-1.91	+/-5.75	8.73		pCi/L					
Cerium-144	U	0.631	+/-19.4	34.0		pCi/L					
Cesium-134	U	1.16	+/-3.40	6.62		pCi/L					
Cesium-136	U	2.01	+/-7.51	14.2		pCi/L					
Cesium-137	U	2.65	+/-4.36	5.62	10.0	pCi/L					
Chromium-51	U	-16	+/-32.6	49.9		pCi/L					
Cobalt-56	U	0.950	+/-3.58	6.11		pCi/L					
Cobalt-57	U	-0.078	+/-2.46	4.33		pCi/L					
Cobalt-58	U	-4.02	+/-2.87	4.41		pCi/L					
Cobalt-60	U	2.72	+/-3.47	7.39		pCi/L					
Europium-152	U	-6.23	+/-9.44	15.0		pCi/L					
Europium-154	U	-10.1	+/-8.52	12.3		pCi/L					
Europium-155	U	1.05	+/-10.6	18.8		pCi/L					
Iridium-192	U	5.01	+/-6.52	5.41		pCi/L					
Iron-59	U	1.89	+/-7.09	13.6		pCi/L					
Lead-210	U	695	+/-1100	1220		pCi/L					
Lead-212	U	-0.813	+/-7.62	12.3		pCi/L					
Lead-214	UI	0.00	+/-13.9	18.3		pCi/L					
Manganese-54	U	3.74	+/-3.50	7.11		pCi/L					
Mercury-203	U	-1.09	+/-3.25	5.82		pCi/L					
Neodymium-147	U	-18.1	+/-32.9	56.0		pCi/L					
Neptunium-239	U	-26.7	+/-25.8	42.7		pCi/L					
Niobium-94	U	3.02	+/-4.69	6.52		pCi/L					
Niobium-95	U	1.33	+/-3.75	5.70		pCi/L					
Potassium-40	U	-43.3	+/-53.4	78.0		pCi/L					
Promethium-144	U	0.0463	+/-3.90	6.31		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 341588021

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.355	+/-4.12	7.37	pCi/L
Radium-228	U	-5.69	+/-16.1	28.5	pCi/L
Ruthenium-106	U	6.58	+/-27.8	51.2	pCi/L
Silver-110m	U	-1.6	+/-3.32	4.76	pCi/L
Sodium-22	U	-3.67	+/-2.98	4.23	pCi/L
Thallium-208	U	2.94	+/-5.31	5.56	pCi/L
Thorium-230	U	186	+/-1400	2290	pCi/L
Thorium-234	U	-71.6	+/-227	388	pCi/L
Tin-113	U	1.29	+/-4.19	6.97	pCi/L
Uranium-235	U	11.0	+/-27.9	30.6	pCi/L
Uranium-238	U	-71.6	+/-227	388	pCi/L
Yttrium-88	U	-2.01	+/-4.22	7.46	pCi/L
Zinc-65	U	-0.129	+/-8.76	13.9	pCi/L
Zirconium-95	U	1.06	+/-6.36	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.853	+/-2.18	4.99	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		10.1	+/-3.03	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	18.1	+/-115	201	300	pCi/L	MYM1	01/31/14	1149	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 38	Project:	WNUC00124
Sample ID:	341588022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 09:44		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-18.2	+/-15.1	24.8		pCi/L		RXF2	01/27/14	0812 1361919	1
Americium-241	U	-1.33	+/-21.5	37.2		pCi/L					
Antimony-124	U	0.368	+/-8.12	16.0		pCi/L					
Antimony-125	U	0.0251	+/-8.84	16.2		pCi/L					
Barium-133	U	0.128	+/-5.02	7.66		pCi/L					
Barium-140	U	-1.13	+/-7.26	13.8		pCi/L					
Beryllium-7	U	-9.84	+/-30.4	54.2		pCi/L					
Bismuth-212	U	-31.9	+/-53.2	83.2		pCi/L					
Bismuth-214	UI	0.00	+/-15.4	12.5		pCi/L					
Cerium-139	U	0.381	+/-3.15	5.64		pCi/L					
Cerium-141	U	8.22	+/-6.26	11.6		pCi/L					
Cerium-144	U	-29.2	+/-22.7	32.8		pCi/L					
Cesium-134	U	-0.379	+/-3.64	6.50		pCi/L					
Cesium-136	U	4.34	+/-8.32	16.4		pCi/L					
Cesium-137		6.78	+/-5.88	5.52	10.0	pCi/L					
Chromium-51	U	28.6	+/-49.9	62.0		pCi/L					
Cobalt-56	U	-1.86	+/-3.63	6.15		pCi/L					
Cobalt-57	U	-0.18	+/-2.78	4.68		pCi/L					
Cobalt-58	U	-2.14	+/-3.14	5.24		pCi/L					
Cobalt-60	U	-0.23	+/-3.39	6.30		pCi/L					
Europium-152	U	1.60	+/-9.59	17.0		pCi/L					
Europium-154	U	-1.61	+/-8.83	16.3		pCi/L					
Europium-155	U	11.8	+/-10.8	19.5		pCi/L					
Iridium-192	U	-2.67	+/-4.14	5.96		pCi/L					
Iron-59	U	-1.65	+/-7.18	13.1		pCi/L					
Lead-210	U	-644	+/-796	1200		pCi/L					
Lead-212	U	0.418	+/-10.0	12.4		pCi/L					
Lead-214	U	9.90	+/-13.2	14.2		pCi/L					
Manganese-54	U	1.40	+/-3.21	6.04		pCi/L					
Mercury-203	U	-1.0	+/-3.84	6.63		pCi/L					
Neodymium-147	U	23.3	+/-43.6	83.6		pCi/L					
Neptunium-239	U	-1.44	+/-28.3	47.8		pCi/L					
Niobium-94	U	1.44	+/-3.27	5.96		pCi/L					
Niobium-95	U	0.997	+/-3.56	6.59		pCi/L					
Potassium-40		83.8	+/-43.7	48.1		pCi/L					
Promethium-144	U	-1.78	+/-5.22	5.98		pCi/L					



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 38  
Sample ID: 341588022

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.949	+/-3.88	7.00	pCi/L
Radium-228	U	-18.2	+/-15.1	24.8	pCi/L
Ruthenium-106	U	-0.138	+/-26.8	49.0	pCi/L
Silver-110m	U	-2.76	+/-3.50	4.87	pCi/L
Sodium-22	U	0.312	+/-3.00	5.79	pCi/L
Thallium-208	U	-3.71	+/-4.69	6.26	pCi/L
Thorium-230	U	-1300	+/-1390	2290	pCi/L
Thorium-234	U	-78.2	+/-214	337	pCi/L
Tin-113	U	2.44	+/-4.86	7.80	pCi/L
Uranium-235	U	-12.9	+/-25.0	37.1	pCi/L
Uranium-238	U	-78.2	+/-214	337	pCi/L
Yttrium-88	U	-1.8	+/-3.97	7.15	pCi/L
Zinc-65	U	4.04	+/-8.91	14.0	pCi/L
Zirconium-95	U	-2.54	+/-6.23	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.708	+/-2.29	4.87	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta	U	2.48	+/-1.69	2.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-19.5	+/-111	197	300	pCi/L	MYM1	01/31/14	1206	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	341588023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 10:34		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-20.9	+/-17.5	25.1		pCi/L		RXF2	01/24/14	1449 1361919	1
Americium-241	U	8.34	+/-28.2	51.3		pCi/L					
Antimony-124	U	2.87	+/-9.00	18.7		pCi/L					
Antimony-125	U	16.0	+/-12.4	18.7		pCi/L					
Barium-133	U	2.29	+/-4.87	8.16		pCi/L					
Barium-140	U	6.00	+/-6.59	14.8		pCi/L					
Beryllium-7	U	-1.19	+/-31.1	55.9		pCi/L					
Bismuth-212	U	-4.09	+/-45.7	85.7		pCi/L					
Bismuth-214		22.5	+/-13.8	13.6		pCi/L					
Cerium-139	U	-5.04	+/-3.10	4.75		pCi/L					
Cerium-141	U	-3.68	+/-6.03	10.0		pCi/L					
Cerium-144	U	-2.2	+/-20.9	36.2		pCi/L					
Cesium-134	U	3.55	+/-3.01	6.40		pCi/L					
Cesium-136	U	-1.84	+/-7.77	14.1		pCi/L					
Cesium-137	U	5.99	+/-3.84	7.70	10.0	pCi/L					
Chromium-51	U	20.0	+/-33.5	63.5		pCi/L					
Cobalt-56	U	-0.329	+/-3.67	6.81		pCi/L					
Cobalt-57	U	-0.112	+/-2.79	4.85		pCi/L					
Cobalt-58	U	-1.04	+/-3.76	6.15		pCi/L					
Cobalt-60	U	1.39	+/-3.77	7.53		pCi/L					
Europium-152	U	8.26	+/-11.0	20.8		pCi/L					
Europium-154	U	6.55	+/-12.9	22.1		pCi/L					
Europium-155	U	5.00	+/-11.2	20.2		pCi/L					
Iridium-192	U	-1.43	+/-3.53	6.22		pCi/L					
Iron-59	U	-0.548	+/-6.98	13.1		pCi/L					
Lead-210	U	-1020	+/-1310	2000		pCi/L					
Lead-212	U	0.706	+/-12.1	12.4		pCi/L					
Lead-214	UI	0.00	+/-14.0	21.3		pCi/L					
Manganese-54	U	-0.168	+/-3.68	6.83		pCi/L					
Mercury-203	U	1.57	+/-3.66	6.84		pCi/L					
Neodymium-147	U	-6.12	+/-40.1	71.0		pCi/L					
Neptunium-239	U	-9.8	+/-29.8	51.1		pCi/L					
Niobium-94	U	2.03	+/-3.28	6.52		pCi/L					
Niobium-95	U	-1.66	+/-3.96	7.09		pCi/L					
Potassium-40	U	7.66	+/-47.7	90.7		pCi/L					
Promethium-144	U	-2.37	+/-3.33	5.82		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 39

Sample ID: 341588023

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.81	+/-4.27	8.19	pCi/L
Radium-228	U	-20.9	+/-17.5	25.1	pCi/L
Ruthenium-106	U	29.2	+/-29.3	58.8	pCi/L
Silver-110m	U	2.43	+/-3.07	5.89	pCi/L
Sodium-22	U	2.31	+/-4.55	7.41	pCi/L
Thallium-208	U	-1.59	+/-5.02	7.35	pCi/L
Thorium-230	U	-1260	+/-1850	2850	pCi/L
Thorium-234	U	-301	+/-266	403	pCi/L
Tin-113	U	3.07	+/-4.69	8.89	pCi/L
Uranium-235	U	0.563	+/-24.9	39.1	pCi/L
Uranium-238	U	-301	+/-266	403	pCi/L
Yttrium-88	U	-0.528	+/-4.61	8.81	pCi/L
Zinc-65	U	9.30	+/-6.74	16.4	pCi/L
Zirconium-95	U	4.68	+/-5.99	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.353	+/-2.45	4.93	5.00	pCi/L	JAOC	02/02/14	1745	1362036	2
Beta		15.3	+/-2.47	2.36	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.6	+/-112	197	300	pCi/L	MYM1	01/31/14	1223	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 341588024  
Matrix: Ground Water  
Collect Date: 13-JAN-14 10:02  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.77	+/-15.1	23.9		pCi/L		RXF2	01/24/14	1453 1361919	1
Americium-241	U	1.63	+/-14.5	22.4		pCi/L					
Antimony-124	U	3.06	+/-7.99	16.3		pCi/L					
Antimony-125	U	5.01	+/-9.88	16.0		pCi/L					
Barium-133	U	4.13	+/-3.64	6.77		pCi/L					
Barium-140	U	-2.84	+/-5.58	9.90		pCi/L					
Beryllium-7	U	-9.27	+/-29.0	49.3		pCi/L					
Bismuth-212	U	-35.6	+/-58.2	75.6		pCi/L					
Bismuth-214	UI	0.00	+/-11.1	16.6		pCi/L					
Cerium-139	U	0.760	+/-2.76	4.99		pCi/L					
Cerium-141	U	2.36	+/-5.90	9.59		pCi/L					
Cerium-144	U	-9.27	+/-18.2	31.9		pCi/L					
Cesium-134	U	-0.0819	+/-3.70	6.72		pCi/L					
Cesium-136	U	-0.152	+/-6.93	12.7		pCi/L					
Cesium-137		24.8	+/-6.46	5.56	10.0	pCi/L					
Chromium-51	U	0.0675	+/-31.5	55.5		pCi/L					
Cobalt-56	U	-1.61	+/-3.57	6.19		pCi/L					
Cobalt-57	U	-0.273	+/-2.26	4.06		pCi/L					
Cobalt-58	U	-1.63	+/-3.46	6.00		pCi/L					
Cobalt-60	U	1.69	+/-4.00	7.36		pCi/L					
Europium-152	U	-0.93	+/-10.4	15.9		pCi/L					
Europium-154	U	-4.57	+/-9.32	16.7		pCi/L					
Europium-155	U	3.72	+/-9.66	16.7		pCi/L					
Iridium-192	U	-0.60	+/-3.27	5.69		pCi/L					
Iron-59	U	-3.15	+/-6.95	11.9		pCi/L					
Lead-210	U	-90.3	+/-325	498		pCi/L					
Lead-212	U	0.678	+/-7.35	11.0		pCi/L					
Lead-214	U	8.48	+/-9.64	15.7		pCi/L					
Manganese-54	U	1.94	+/-3.49	6.64		pCi/L					
Mercury-203	U	-0.431	+/-3.39	5.93		pCi/L					
Neodymium-147	U	-19.6	+/-39.6	70.1		pCi/L					
Neptunium-239	U	-2.71	+/-25.0	45.0		pCi/L					
Niobium-94	U	1.01	+/-3.09	5.79		pCi/L					
Niobium-95	U	1.10	+/-3.77	6.01		pCi/L					
Potassium-40	U	41.6	+/-62.7	42.9		pCi/L					
Promethium-144	U	-0.498	+/-3.17	5.70		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 341588024

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.64	+/-3.98	6.56	pCi/L
Radium-228	U	-2.77	+/-15.1	23.9	pCi/L
Ruthenium-106	U	43.6	+/-43.1	45.9	pCi/L
Silver-110m	U	2.00	+/-3.13	5.48	pCi/L
Sodium-22	U	-1.51	+/-3.30	5.93	pCi/L
Thallium-208	U	-1.03	+/-4.14	6.68	pCi/L
Thorium-230	U	147	+/-1100	1690	pCi/L
Thorium-234	U	52.0	+/-179	204	pCi/L
Tin-113	U	3.98	+/-3.90	7.42	pCi/L
Uranium-235	U	26.8	+/-30.2	33.1	pCi/L
Uranium-238	U	52.0	+/-179	204	pCi/L
Yttrium-88	U	-1.13	+/-3.71	6.76	pCi/L
Zinc-65	U	-0.287	+/-7.53	13.3	pCi/L
Zirconium-95	U	3.38	+/-5.12	10.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.693	+/-2.61	4.83	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		17.6	+/-3.04	3.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	47.6	+/-120	207	300	pCi/L	MYM1	01/31/14	1239	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	341588025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 10:55		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.12	+/-20.0	34.7		pCi/L					
Americium-241	U	9.08	+/-24.2	39.4		pCi/L					
Antimony-124	U	-4.07	+/-10.8	19.9		pCi/L					
Antimony-125	U	1.46	+/-11.5	20.2		pCi/L					
Barium-133	U	2.22	+/-5.75	9.22		pCi/L					
Barium-140	U	3.36	+/-9.11	18.7		pCi/L					
Beryllium-7	U	-9.59	+/-36.7	66.3		pCi/L					
Bismuth-212	U	0.446	+/-78.9	109		pCi/L					
Bismuth-214	U	9.99	+/-17.9	15.1		pCi/L					
Cerium-139	U	-0.368	+/-3.77	6.78		pCi/L					
Cerium-141	U	4.72	+/-7.64	13.3		pCi/L					
Cerium-144	U	-26.7	+/-25.9	41.5		pCi/L					
Cesium-134	U	0.950	+/-3.96	7.49		pCi/L					
Cesium-136	U	4.90	+/-10.1	19.9		pCi/L					
Cesium-137		7.87	+/-6.05	7.65	10.0	pCi/L					
Chromium-51	U	1.94	+/-45.5	80.3		pCi/L					
Cobalt-56	U	-0.896	+/-4.70	8.28		pCi/L					
Cobalt-57	U	-1.51	+/-3.30	5.50		pCi/L					
Cobalt-58	U	2.65	+/-4.15	8.10		pCi/L					
Cobalt-60	UI	0.00	+/-9.71	8.54		pCi/L					
Europium-152	U	1.79	+/-12.8	22.7		pCi/L					
Europium-154	U	2.04	+/-11.3	22.1		pCi/L					
Europium-155	U	-14.5	+/-12.9	20.8		pCi/L					
Iridium-192	U	-0.306	+/-4.61	8.08		pCi/L					
Iron-59	U	-0.148	+/-8.29	15.7		pCi/L					
Lead-210	U	68.8	+/-784	1180		pCi/L					
Lead-212	U	1.64	+/-9.91	14.9		pCi/L					
Lead-214	U	9.21	+/-17.4	20.8		pCi/L					
Manganese-54	U	-2.01	+/-4.00	6.83		pCi/L					
Mercury-203	U	-2.62	+/-5.27	7.75		pCi/L					
Neodymium-147	U	-48.4	+/-58.2	99.4		pCi/L					
Neptunium-239	U	-24.8	+/-34.7	57.1		pCi/L					
Niobium-94	U	0.0892	+/-4.46	8.01		pCi/L					
Niobium-95	U	1.85	+/-4.54	8.54		pCi/L					
Potassium-40	UI	0.00	+/-91.0	71.7		pCi/L					
Promethium-144	U	-2.72	+/-4.36	7.40		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 43  
Sample ID: 341588025

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.05	+/-5.69	9.07	pCi/L
Radium-228	U	-3.12	+/-20.0	34.7	pCi/L
Ruthenium-106	U	3.96	+/-36.0	66.5	pCi/L
Silver-110m	U	-0.14	+/-4.40	6.93	pCi/L
Sodium-22	U	0.649	+/-3.97	7.76	pCi/L
Thallium-208	U	0.567	+/-6.33	6.95	pCi/L
Thorium-230	U	-516	+/-1720	2620	pCi/L
Thorium-234	U	89.0	+/-232	350	pCi/L
Tin-113	U	-2.49	+/-5.92	10.0	pCi/L
Uranium-235	U	-10	+/-27.3	45.2	pCi/L
Uranium-238	U	89.0	+/-232	350	pCi/L
Yttrium-88	U	2.32	+/-3.81	8.71	pCi/L
Zinc-65	U	-6.43	+/-9.59	16.5	pCi/L
Zirconium-95	U	-2.69	+/-7.77	13.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.229	+/-2.28	4.95	5.00	pCi/L	JAOC	02/04/14	1322	1362036	2
Beta	U	2.11	+/-2.32	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.3	+/-115	203	300	pCi/L	MYM1	01/31/14	1256	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	341588026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 11:45		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.36	+/-24.1	33.4		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	5.35	+/-12.1	19.6		pCi/L					
Antimony-124	U	2.57	+/-8.70	17.7		pCi/L					
Antimony-125	U	3.78	+/-10.2	19.0		pCi/L					
Barium-133	U	-3.47	+/-7.08	8.24		pCi/L					
Barium-140	U	-4.62	+/-9.36	16.4		pCi/L					
Beryllium-7	U	-18.5	+/-34.1	59.2		pCi/L					
Bismuth-212	U	21.3	+/-62.0	97.7		pCi/L					
Bismuth-214		25.7	+/-14.8	13.8		pCi/L					
Cerium-139	U	-0.577	+/-2.94	5.23		pCi/L					
Cerium-141	U	-1.97	+/-7.82	11.2		pCi/L					
Cerium-144	U	0.352	+/-21.2	35.7		pCi/L					
Cesium-134	U	2.10	+/-4.25	8.22		pCi/L					
Cesium-136	U	5.50	+/-9.48	18.4		pCi/L					
Cesium-137		7.64	+/-5.41	6.69	10.0	pCi/L					
Chromium-51	U	-34.2	+/-36.7	59.8		pCi/L					
Cobalt-56	U	0.132	+/-4.19	7.75		pCi/L					
Cobalt-57	U	0.947	+/-2.70	4.65		pCi/L					
Cobalt-58	U	0.439	+/-3.84	7.22		pCi/L					
Cobalt-60	U	1.67	+/-4.27	7.54		pCi/L					
Europium-152	U	7.21	+/-13.4	18.9		pCi/L					
Europium-154	U	-5.7	+/-10.9	19.6		pCi/L					
Europium-155	U	-0.599	+/-10.8	18.4		pCi/L					
Iridium-192	U	0.141	+/-3.54	6.21		pCi/L					
Iron-59	UI	0.00	+/-8.55	14.9		pCi/L					
Lead-210	U	7.84	+/-268	430		pCi/L					
Lead-212	U	-0.442	+/-8.51	13.0		pCi/L					
Lead-214	U	0.554	+/-8.88	16.3		pCi/L					
Manganese-54	U	-6.05	+/-3.51	5.31		pCi/L					
Mercury-203	U	-0.466	+/-3.80	6.61		pCi/L					
Neodymium-147	U	-20.2	+/-47.5	83.0		pCi/L					
Neptunium-239	U	16.3	+/-28.8	50.2		pCi/L					
Niobium-94	U	-0.809	+/-3.63	6.32		pCi/L					
Niobium-95	U	1.54	+/-3.65	7.10		pCi/L					
Potassium-40	U	21.2	+/-55.2	102		pCi/L					
Promethium-144	U	0.729	+/-4.04	7.25		pCi/L					



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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	341588026	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.066	+/-4.41	8.02	pCi/L
Radium-228	U	4.36	+/-24.1	33.4	pCi/L
Ruthenium-106	U	-4.9	+/-33.8	59.9	pCi/L
Silver-110m	U	-1.51	+/-3.87	5.67	pCi/L
Sodium-22	U	-2.07	+/-3.85	6.86	pCi/L
Thallium-208	U	4.35	+/-6.07	6.58	pCi/L
Thorium-230	U	152	+/-1060	1560	pCi/L
Thorium-234	U	21.7	+/-176	176	pCi/L
Tin-113	U	2.47	+/-4.85	9.12	pCi/L
Uranium-235	U	17.6	+/-21.9	38.2	pCi/L
Uranium-238	U	21.7	+/-176	176	pCi/L
Yttrium-88	U	-1.64	+/-3.72	6.63	pCi/L
Zinc-65	U	-4.65	+/-9.93	14.3	pCi/L
Zirconium-95	U	-0.93	+/-7.58	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-2.39	+/-1.89	4.96	5.00	pCi/L	JAOC	02/05/14	1537	1362036	2
Beta		4.75	+/-2.42	3.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	21.6	+/-113	196	300	pCi/L	MYM1	01/31/14	1312	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	341588027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 12:12		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.8	+/-21.8	22.2		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	5.01	+/-12.7	19.6		pCi/L					
Antimony-124	U	-1.41	+/-8.84	16.3		pCi/L					
Antimony-125	U	-9.96	+/-8.97	14.1		pCi/L					
Barium-133	U	1.22	+/-4.41	6.90		pCi/L					
Barium-140	U	-8.11	+/-7.07	10.8		pCi/L					
Beryllium-7	U	2.90	+/-27.6	51.0		pCi/L					
Bismuth-212	U	45.2	+/-47.7	92.9		pCi/L					
Bismuth-214		13.1	+/-12.4	12.1		pCi/L					
Cerium-139	U	-1.69	+/-2.76	4.74		pCi/L					
Cerium-141	U	3.17	+/-6.10	11.0		pCi/L					
Cerium-144	U	10.9	+/-22.1	36.0		pCi/L					
Cesium-134	U	1.81	+/-3.90	6.55		pCi/L					
Cesium-136	U	4.25	+/-8.09	16.1		pCi/L					
Cesium-137	UI	0.00	+/-6.33	6.09	10.0	pCi/L					
Chromium-51	U	-10.3	+/-36.0	61.4		pCi/L					
Cobalt-56	U	-1.73	+/-3.79	6.51		pCi/L					
Cobalt-57	U	1.26	+/-2.51	4.56		pCi/L					
Cobalt-58	U	0.436	+/-3.45	6.34		pCi/L					
Cobalt-60	UI	0.00	+/-6.43	6.46		pCi/L					
Europium-152	U	-9.06	+/-10.1	16.5		pCi/L					
Europium-154	U	3.28	+/-9.22	18.2		pCi/L					
Europium-155	U	5.46	+/-9.64	17.7		pCi/L					
Iridium-192	U	1.59	+/-3.44	6.17		pCi/L					
Iron-59	U	3.21	+/-5.78	10.9		pCi/L					
Lead-210	U	28.5	+/-273	315		pCi/L					
Lead-212	U	3.90	+/-10.6	9.74		pCi/L					
Lead-214	U	10.5	+/-12.3	12.7		pCi/L					
Manganese-54	U	0.235	+/-3.54	6.38		pCi/L					
Mercury-203	U	3.50	+/-3.89	6.69		pCi/L					
Neodymium-147	U	12.7	+/-47.6	88.8		pCi/L					
Neptunium-239	U	-15.2	+/-25.0	43.4		pCi/L					
Niobium-94	U	-1.58	+/-2.93	5.05		pCi/L					
Niobium-95	U	1.24	+/-3.58	6.67		pCi/L					
Potassium-40	U	-23.9	+/-47.0	85.8		pCi/L					
Promethium-144	U	1.78	+/-3.38	6.33		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 47 Project: WNUC00124  
Sample ID: 341588027 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.859	+/-3.97	7.37	pCi/L
Radium-228	U	11.8	+/-21.8	22.2	pCi/L
Ruthenium-106	U	-14.2	+/-31.3	54.6	pCi/L
Silver-110m	U	-1.13	+/-3.88	5.88	pCi/L
Sodium-22	U	1.67	+/-3.19	6.45	pCi/L
Thallium-208	U	-1.88	+/-4.08	6.60	pCi/L
Thorium-230	U	240	+/-949	1450	pCi/L
Thorium-234	U	69.1	+/-147	178	pCi/L
Tin-113	U	-0.865	+/-4.22	7.21	pCi/L
Uranium-235	U	-20.9	+/-20.0	33.8	pCi/L
Uranium-238	U	69.1	+/-147	178	pCi/L
Yttrium-88	U	1.02	+/-3.15	6.53	pCi/L
Zinc-65	U	2.47	+/-6.69	11.8	pCi/L
Zirconium-95	U	2.11	+/-6.27	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.86	+/-3.00	4.93	5.00	pCi/L	JAOC	02/02/14	1745	1362036	2
Beta		2.92	+/-1.93	2.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	67.3	+/-111	189	300	pCi/L	MYM1	01/31/14	1329	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			103	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	341588028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 11:00		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.57	+/-17.3	27.9		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	-7.28	+/-31.4	54.1		pCi/L					
Antimony-124	U	-2.89	+/-7.23	13.1		pCi/L					
Antimony-125	U	-1.47	+/-9.00	15.9		pCi/L					
Barium-133	U	-1.07	+/-4.90	7.52		pCi/L					
Barium-140	U	0.816	+/-9.11	17.8		pCi/L					
Beryllium-7	U	15.6	+/-33.8	62.4		pCi/L					
Bismuth-212	U	-29.3	+/-47.9	83.9		pCi/L					
Bismuth-214	U	12.1	+/-12.7	13.3		pCi/L					
Cerium-139	U	-0.322	+/-3.44	5.76		pCi/L					
Cerium-141	U	-1.11	+/-7.08	11.9		pCi/L					
Cerium-144	U	8.60	+/-22.0	38.4		pCi/L					
Cesium-134	U	1.56	+/-3.92	7.56		pCi/L					
Cesium-136	U	0.882	+/-8.77	16.6		pCi/L					
Cesium-137	U	7.05	+/-4.29	8.81	10.0	pCi/L					
Chromium-51	U	-63.4	+/-42.7	59.9		pCi/L					
Cobalt-56	U	-0.0723	+/-3.75	6.96		pCi/L					
Cobalt-57	U	0.884	+/-2.92	5.07		pCi/L					
Cobalt-58	U	-0.145	+/-3.79	7.01		pCi/L					
Cobalt-60	U	6.84	+/-4.68	9.92		pCi/L					
Europium-152	U	-3.04	+/-11.9	18.1		pCi/L					
Europium-154	U	-7.77	+/-10.1	16.5		pCi/L					
Europium-155	U	6.01	+/-12.0	21.3		pCi/L					
Iridium-192	U	4.49	+/-3.88	7.41		pCi/L					
Iron-59	U	5.18	+/-7.58	15.4		pCi/L					
Lead-210	U	-713	+/-1510	2300		pCi/L					
Lead-212	U	4.48	+/-12.1	13.5		pCi/L					
Lead-214	U	13.3	+/-13.8	15.5		pCi/L					
Manganese-54	U	1.37	+/-3.15	6.17		pCi/L					
Mercury-203	U	1.78	+/-4.02	7.40		pCi/L					
Neodymium-147	U	-23.8	+/-53.7	91.3		pCi/L					
Neptunium-239	U	-4.82	+/-33.5	53.9		pCi/L					
Niobium-94	U	1.62	+/-3.39	6.52		pCi/L					
Niobium-95	U	3.41	+/-3.84	7.70		pCi/L					
Potassium-40	U	37.0	+/-59.0	68.5		pCi/L					
Promethium-144	U	-0.493	+/-3.44	6.29		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	341588028	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.379	+/-4.27	7.55	pCi/L
Radium-228	U	-8.57	+/-17.3	27.9	pCi/L
Ruthenium-106	U	10.8	+/-31.2	57.3	pCi/L
Silver-110m	U	-1.17	+/-3.57	6.45	pCi/L
Sodium-22	U	-3.21	+/-3.59	5.73	pCi/L
Thallium-208	U	2.33	+/-5.08	5.70	pCi/L
Thorium-230	U	490	+/-1850	2670	pCi/L
Thorium-234	U	109	+/-297	455	pCi/L
Tin-113	U	3.99	+/-3.98	7.78	pCi/L
Uranium-235	U	13.8	+/-27.3	41.8	pCi/L
Uranium-238	U	109	+/-297	455	pCi/L
Yttrium-88	U	-3.27	+/-3.95	6.54	pCi/L
Zinc-65	U	6.61	+/-9.17	13.3	pCi/L
Zirconium-95	U	0.00	+/-6.67	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.766	+/-2.16	4.87	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		9.86	+/-2.97	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.2	+/-110	189	300	pCi/L	MYM1	01/31/14	1346	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			103	(15%-125%)

### Notes:

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

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## QC Summary

Report Date: February 12, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 341588

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1364996										
QC1203031632	341588019	DUP									
Uranium-233/234		12.0		11.8	pCi/L	2.04		(0%-20%)	MXS2	02/08/14	12:57
	Uncertainty	+/-1.99		+/-1.93							
Uranium-235/236		0.631		0.575	pCi/L	9.27		(0% - 100%)			
	Uncertainty	+/-0.547		+/-0.522							
Uranium-238		2.19		4.18	pCi/L	62.3*		(0%-20%)			
	Uncertainty	+/-0.887		+/-1.15							
QC1203031633	LCS										
Uranium-233/234				26.1	pCi/L					02/08/14	12:57
	Uncertainty			+/-2.86							
Uranium-235/236				1.69	pCi/L						
	Uncertainty			+/-0.830							
Uranium-238		27.0		26.7	pCi/L		98.7	(75%-125%)			
	Uncertainty			+/-2.88							
QC1203031631	MB										
Uranium-233/234			U	0.0256	pCi/L					02/08/14	12:57
	Uncertainty			+/-0.292							
Uranium-235/236			U	0.151	pCi/L						
	Uncertainty			+/-0.346							
Uranium-238			U	0.0609	pCi/L						
	Uncertainty			+/-0.228							
Rad Gamma Spec											
Batch	1361916										
QC1203023711	341588001	DUP									
Actinium-228		U	1.99	U	-16.3	pCi/L	N/A		N/A	RXF2	02/04/14 08:56
	Uncertainty		+/-20.7		+/-16.7						
Americium-241		U	14.0	U	10.3	pCi/L	N/A		N/A		
	Uncertainty		+/-28.2		+/-21.4						
Antimony-124		U	-4.73	U	7.32	pCi/L	N/A		N/A		
	Uncertainty		+/-10.5		+/-10.1						
Antimony-125		U	4.62	U	1.19	pCi/L	N/A		N/A		
	Uncertainty		+/-8.72		+/-10.3						
Barium-133		U	-0.452	U	0.706	pCi/L	N/A		N/A		
	Uncertainty		+/-5.18		+/-4.63						
Barium-140		U	1.70	U	1.93	pCi/L	N/A		N/A		
	Uncertainty		+/-10.2		+/-14.7						
Beryllium-7		U	-4.76	U	-17.4	pCi/L	N/A		N/A		
	Uncertainty		+/-38.0		+/-37.2						
Bismuth-212		U	20.9	U	-33.5	pCi/L	N/A		N/A		
	Uncertainty		+/-45.4		+/-61.3						
Bismuth-214		U	11.1	U	8.44	pCi/L	N/A		N/A		

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
	Uncertainty										
		+/-9.86		+/-10.9							
Cerium-139	U	1.52	U	1.60	pCi/L	N/A		N/A	RXF2	02/04/14	08:56
	Uncertainty	+/-3.13		+/-3.67							
Cerium-141	U	-2.13	U	0.772	pCi/L	N/A		N/A			
	Uncertainty	+/-7.77		+/-8.62							
Cerium-144	U	8.10	U	2.11	pCi/L	N/A		N/A			
	Uncertainty	+/-20.0		+/-24.3							
Cesium-134	U	-0.838	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-3.81		+/-4.12							
Cesium-136	U	21.3	U	5.58	pCi/L	N/A		N/A			
	Uncertainty	+/-8.77		+/-15.3							
Cesium-137	U	1.56	U	1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.37		+/-3.82							
Chromium-51	U	31.7	U	-35.5	pCi/L	N/A		N/A			
	Uncertainty	+/-43.1		+/-51.2							
Cobalt-56	U	-2.13	U	-2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.15		+/-4.77							
Cobalt-57	U	-2.27	U	2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-2.66		+/-3.21							
Cobalt-58	U	-2.85	U	-1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-3.71		+/-4.99							
Cobalt-60	U	0.607	U	-4.76	pCi/L	N/A		N/A			
	Uncertainty	+/-4.48		+/-5.40							
Europium-152	U	-6.9	U	5.21	pCi/L	N/A		N/A			
	Uncertainty	+/-9.57		+/-16.6							
Europium-154	U	-5.22	U	-3.51	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-9.43							
Europium-155	U	-5.3	U	-1.46	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-12.3							
Iridium-192	U	5.33	U	0.491	pCi/L	N/A		N/A			
	Uncertainty	+/-4.04		+/-4.29							
Iron-59	U	-0.918	U	15.3	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-9.61							
Lead-210	U	187	U	-1140	pCi/L	N/A		N/A			
	Uncertainty	+/-1520		+/-696							
Lead-212	U	0.977	U	-2.09	pCi/L	N/A		N/A			
	Uncertainty	+/-8.73		+/-7.90							
Lead-214	U	5.56	U	-0.409	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-10.1							
Manganese-54	U	1.21	U	-0.0687	pCi/L	N/A		N/A			
	Uncertainty	+/-3.18		+/-3.56							
Mercury-203	U	-1.01	U	-0.382	pCi/L	N/A		N/A			
	Uncertainty	+/-4.20		+/-4.67							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Neodymium-147	U	-2.67	U	-21	pCi/L	N/A		N/A			
	Uncertainty	+/-72.4		+/-94.4							
Neptunium-239	U	22.1	U	-9.5	pCi/L	N/A		N/A	RXF2	02/04/14	08:56
	Uncertainty	+/-27.6		+/-33.6							
Niobium-94	U	-0.442	U	-1.04	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-3.57							
Niobium-95	U	1.43	U	-0.334	pCi/L	N/A		N/A			
	Uncertainty	+/-3.71		+/-4.66							
Potassium-40	U	22.7	U	-40.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.2		+/-46.5							
Promethium-144	U	2.22	U	2.64	pCi/L	N/A		N/A			
	Uncertainty	+/-3.59		+/-3.79							
Promethium-146	U	-0.27	U	3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-4.61							
Radium-228	U	1.99	U	-16.3	pCi/L	N/A		N/A			
	Uncertainty	+/-20.7		+/-16.7							
Ruthenium-106	U	-5.97	U	20.7	pCi/L	N/A		N/A			
	Uncertainty	+/-34.6		+/-36.5							
Silver-110m	U	-1.96	U	-1.53	pCi/L	N/A		N/A			
	Uncertainty	+/-3.27		+/-3.86							
Sodium-22	U	-1.79	U	-1.66	pCi/L	N/A		N/A			
	Uncertainty	+/-4.21		+/-3.37							
Thallium-208	U	-7.87	U	0.837	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-5.02							
Thorium-230	U	-3010	U	683	pCi/L	N/A		N/A			
	Uncertainty	+/-1850		+/-1360							
Thorium-234	U	-119	U	85.6	pCi/L	N/A		N/A			
	Uncertainty	+/-257		+/-216							
Tin-113	U	-1.14	U	-0.713	pCi/L	N/A		N/A			
	Uncertainty	+/-4.48		+/-4.96							
Uranium-235	U	2.82	U	-12.9	pCi/L	N/A		N/A			
	Uncertainty	+/-24.8		+/-27.6							
Uranium-238	U	-119	U	85.6	pCi/L	N/A		N/A			
	Uncertainty	+/-257		+/-216							
Yttrium-88	U	-0.148	U	9.81	pCi/L	N/A		N/A			
	Uncertainty	+/-3.93		+/-9.83							
Zinc-65	U	3.88	U	-2.94	pCi/L	N/A		N/A			
	Uncertainty	+/-7.58		+/-8.86							
Zirconium-95	U	-7.83	U	-1.75	pCi/L	N/A		N/A			
	Uncertainty	+/-7.97		+/-7.03							
QC1203023712	LCS										
Actinium-228			U	-15.3	pCi/L					01/27/14	11:59
	Uncertainty			+/-539							
Americium-241	1.11E+05			1.24E+05	pCi/L		112	(75%-125%)			
	Uncertainty										



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
				+/-1540							
Antimony-124			U	-100	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-109							
Antimony-125			U	-463	pCi/L						
	Uncertainty			+/-283							
Barium-133			U	-9.71	pCi/L						
	Uncertainty			+/-115							
Barium-140			U	18.0	pCi/L						
	Uncertainty			+/-70.8							
Beryllium-7			U	287	pCi/L						
	Uncertainty			+/-900							
Bismuth-212			U	-911	pCi/L						
	Uncertainty			+/-1470							
Bismuth-214			U	29.7	pCi/L						
	Uncertainty			+/-192							
Cerium-139				2230	pCi/L						
	Uncertainty			+/-119							
Cerium-141			U	-33.3	pCi/L						
	Uncertainty			+/-117							
Cerium-144			U	-36.1	pCi/L						
	Uncertainty			+/-563							
Cesium-134			U	116	pCi/L						
	Uncertainty			+/-130							
Cesium-136			U	-4.84	pCi/L						
	Uncertainty			+/-202							
Cesium-137	45400			47200	pCi/L		104	(75%-125%)			
	Uncertainty			+/-432							
Chromium-51			U	157	pCi/L						
	Uncertainty			+/-750							
Cobalt-56			U	-89.1	pCi/L						
	Uncertainty			+/-124							
Cobalt-57				6990	pCi/L						
	Uncertainty			+/-151							
Cobalt-58			U	77.3	pCi/L						
	Uncertainty			+/-116							
Cobalt-60	59500			60700	pCi/L		102	(75%-125%)			
	Uncertainty			+/-552							
Europium-152			U	-130	pCi/L						
	Uncertainty			+/-267							
Europium-154			U	64.8	pCi/L						
	Uncertainty			+/-201							
Europium-155			U	-95.6	pCi/L						
	Uncertainty			+/-287							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Iridium-192			U	51.7	pCi/L						
	Uncertainty			+/-89.6							
Iron-59			U	74.4	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-267							
Lead-210				1.39E+06	pCi/L						
	Uncertainty			+/-26000							
Lead-212			U	-22.9	pCi/L						
	Uncertainty			+/-157							
Lead-214			U	33.0	pCi/L						
	Uncertainty			+/-201							
Manganese-54			U	49.5	pCi/L						
	Uncertainty			+/-116							
Mercury-203			U	56.8	pCi/L						
	Uncertainty			+/-90.2							
Neodymium-147			U	-405	pCi/L						
	Uncertainty			+/-797							
Neptunium-239			U	730	pCi/L						
	Uncertainty			+/-848							
Niobium-94			U	-11.6	pCi/L						
	Uncertainty			+/-94.5							
Niobium-95			U	46.9	pCi/L						
	Uncertainty			+/-111							
Potassium-40			U	-70.9	pCi/L						
	Uncertainty			+/-500							
Promethium-144			U	85.6	pCi/L						
	Uncertainty			+/-95.0							
Promethium-146			U	23.2	pCi/L						
	Uncertainty			+/-138							
Radium-228			U	-15.3	pCi/L						
	Uncertainty			+/-539							
Ruthenium-106			U	77.0	pCi/L						
	Uncertainty			+/-897							
Silver-110m				1710	pCi/L						
	Uncertainty			+/-138							
Sodium-22			U	35.1	pCi/L						
	Uncertainty			+/-70.4							
Thallium-208			U	-88.4	pCi/L						
	Uncertainty			+/-116							
Thorium-230				65200	pCi/L						
	Uncertainty			+/-45400							
Thorium-234			U	-5950	pCi/L						
	Uncertainty			+/-6450							
Tin-113				1710	pCi/L						
	Uncertainty			+/-198							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Uranium-235			U	-388	pCi/L						
	Uncertainty			+/-479							
Uranium-238			U	-5950	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-6450							
Yttrium-88				2240	pCi/L						
	Uncertainty			+/-158							
Zinc-65				24300	pCi/L						
	Uncertainty			+/-711							
Zirconium-95			U	75.9	pCi/L						
	Uncertainty			+/-198							
QC1203023710	MB										
Actinium-228			U	-5.34	pCi/L					01/28/14	08:42
	Uncertainty			+/-13.8							
Americium-241			U	-6.14	pCi/L						
	Uncertainty			+/-14.3							
Antimony-124			U	5.12	pCi/L						
	Uncertainty			+/-7.28							
Antimony-125			U	5.14	pCi/L						
	Uncertainty			+/-8.09							
Barium-133			U	-3.03	pCi/L						
	Uncertainty			+/-4.72							
Barium-140			U	-0.408	pCi/L						
	Uncertainty			+/-3.99							
Beryllium-7			U	-20.4	pCi/L						
	Uncertainty			+/-24.0							
Bismuth-212			U	33.2	pCi/L						
	Uncertainty			+/-43.3							
Bismuth-214			U	1.34	pCi/L						
	Uncertainty			+/-9.97							
Cerium-139			U	-0.318	pCi/L						
	Uncertainty			+/-2.47							
Cerium-141			U	-0.755	pCi/L						
	Uncertainty			+/-4.56							
Cerium-144			U	2.92	pCi/L						
	Uncertainty			+/-15.9							
Cesium-134			U	0.529	pCi/L						
	Uncertainty			+/-3.37							
Cesium-136			U	-6.06	pCi/L						
	Uncertainty			+/-5.14							
Cesium-137			U	4.48	pCi/L						
	Uncertainty			+/-4.73							
Chromium-51			U	26.2	pCi/L						
	Uncertainty			+/-25.7							
Cobalt-56			U	1.51	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch		1361916									
Cobalt-57				+/-3.14							
			U	0.414	pCi/L				RXF2	01/28/14	08:42
Cobalt-58	Uncertainty			+/-2.10							
			U	-2.31	pCi/L						
Cobalt-60	Uncertainty			+/-3.11							
			U	0.308	pCi/L						
Europium-152	Uncertainty			+/-3.27							
			U	4.64	pCi/L						
Europium-154	Uncertainty			+/-9.20							
			U	-1.08	pCi/L						
Europium-155	Uncertainty			+/-9.23							
			U	-8.76	pCi/L						
Iridium-192	Uncertainty			+/-9.00							
			U	-1.47	pCi/L						
Iron-59	Uncertainty			+/-3.11							
			U	0.304	pCi/L						
Lead-210	Uncertainty			+/-6.03							
			U	27.2	pCi/L						
Lead-212	Uncertainty			+/-428							
			U	8.37	pCi/L						
Lead-214	Uncertainty			+/-11.0							
			U	4.45	pCi/L						
Manganese-54	Uncertainty			+/-11.4							
			U	-1.31	pCi/L						
Mercury-203	Uncertainty			+/-3.10							
			U	-1.84	pCi/L						
Neodymium-147	Uncertainty			+/-2.92							
			U	9.76	pCi/L						
Neptunium-239	Uncertainty			+/-26.2							
			U	-15.3	pCi/L						
Niobium-94	Uncertainty			+/-22.9							
			U	0.0786	pCi/L						
Niobium-95	Uncertainty			+/-3.09							
			U	-1.44	pCi/L						
Potassium-40	Uncertainty			+/-3.09							
			U	-3.2	pCi/L						
Promethium-144	Uncertainty			+/-42.3							
			U	0.199	pCi/L						
Promethium-146	Uncertainty			+/-3.08							
			U	1.18	pCi/L						
Radium-228	Uncertainty			+/-4.09							
			U	-5.34	pCi/L						
	Uncertainty			+/-13.8							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361916										
Ruthenium-106			U	-1.46	pCi/L						
	Uncertainty			+/-30.5							
Silver-110m			U	-0.383	pCi/L				RXF2	01/28/14	08:42
	Uncertainty			+/-3.40							
Sodium-22			U	-0.228	pCi/L						
	Uncertainty			+/-3.26							
Thallium-208			U	1.40	pCi/L						
	Uncertainty			+/-5.40							
Thorium-230			U	14.3	pCi/L						
	Uncertainty			+/-969							
Thorium-234			U	38.6	pCi/L						
	Uncertainty			+/-176							
Tin-113			U	1.21	pCi/L						
	Uncertainty			+/-3.79							
Uranium-235			U	-8.08	pCi/L						
	Uncertainty			+/-19.2							
Uranium-238			U	38.6	pCi/L						
	Uncertainty			+/-176							
Yttrium-88			U	-0.426	pCi/L						
	Uncertainty			+/-3.39							
Zinc-65			U	-5.78	pCi/L						
	Uncertainty			+/-6.33							
Zirconium-95			U	-1.25	pCi/L						
	Uncertainty			+/-4.59							
Batch	1361919										
QC1203023714 341588021 DUP											
Actinium-228	U	-5.69	U	3.51	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-16.1		+/-20.9							
Americium-241	U	-12.7	U	-19.2	pCi/L	N/A		N/A			
	Uncertainty	+/-21.4		+/-19.8							
Antimony-124	U	-0.823	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-7.13		+/-8.30							
Antimony-125	U	3.25	U	-1.72	pCi/L	N/A		N/A			
	Uncertainty	+/-8.56		+/-13.4							
Barium-133	U	0.929	U	5.01	pCi/L	N/A		N/A			
	Uncertainty	+/-4.08		+/-5.88							
Barium-140	U	0.253	U	-6.49	pCi/L	N/A		N/A			
	Uncertainty	+/-6.51		+/-9.87							
Beryllium-7	U	2.71	U	13.2	pCi/L	N/A		N/A			
	Uncertainty	+/-27.4		+/-37.6							
Bismuth-212	U	-9.25	U	-19.9	pCi/L	N/A		N/A			
	Uncertainty	+/-53.8		+/-70.5							
Bismuth-214		20.8	U	18.8	pCi/L	5.95		(0% - 100%)			
	Uncertainty	+/-12.4		+/-14.2							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Cerium-139	U	-2.0	U	-0.638	pCi/L	N/A		N/A			
	Uncertainty	+/-3.11		+/-3.65							
Cerium-141	U	-1.91	U	5.99	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-5.75		+/-7.22							
Cerium-144	U	0.631	U	2.48	pCi/L	N/A		N/A			
	Uncertainty	+/-19.4		+/-24.9							
Cesium-134	U	1.16	U	1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-4.69							
Cesium-136	U	2.01	U	-4.83	pCi/L	N/A		N/A			
	Uncertainty	+/-7.51		+/-7.54							
Cesium-137	U	2.65	U	3.40	pCi/L	N/A		N/A			
	Uncertainty	+/-4.36		+/-4.92							
Chromium-51	U	-16	U	-2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-32.6		+/-43.4							
Cobalt-56	U	0.950	U	-2.54	pCi/L	N/A		N/A			
	Uncertainty	+/-3.58		+/-4.44							
Cobalt-57	U	-0.078	U	-1.7	pCi/L	N/A		N/A			
	Uncertainty	+/-2.46		+/-3.02							
Cobalt-58	U	-4.02	U	-1.54	pCi/L	N/A		N/A			
	Uncertainty	+/-2.87		+/-5.69							
Cobalt-60	U	2.72	U	2.52	pCi/L	N/A		N/A			
	Uncertainty	+/-3.47		+/-3.37							
Europium-152	U	-6.23	U	4.26	pCi/L	N/A		N/A			
	Uncertainty	+/-9.44		+/-12.8							
Europium-154	U	-10.1	U	-12.9	pCi/L	N/A		N/A			
	Uncertainty	+/-8.52		+/-13.9							
Europium-155	U	1.05	U	4.04	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-13.2							
Iridium-192	U	5.01	U	1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-6.52		+/-4.24							
Iron-59	U	1.89	U	2.12	pCi/L	N/A		N/A			
	Uncertainty	+/-7.09		+/-9.12							
Lead-210	U	695	U	-360	pCi/L	N/A		N/A			
	Uncertainty	+/-1100		+/-588							
Lead-212	U	-0.813	U	6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-7.62		+/-9.60							
Lead-214	UI	0.00	U	7.54	pCi/L	N/A		N/A			
	Uncertainty	+/-13.9		+/-14.2							
Manganese-54	U	3.74	U	1.19	pCi/L	N/A		N/A			
	Uncertainty	+/-3.50		+/-4.51							
Mercury-203	U	-1.09	U	1.04	pCi/L	N/A		N/A			
	Uncertainty	+/-3.25		+/-4.86							
Neodymium-147	U	-18.1	U	-17.2	pCi/L	N/A		N/A			
	Uncertainty	+/-32.9		+/-54.9							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Neptunium-239	U	-26.7	U	-2.49	pCi/L	N/A		N/A			
	Uncertainty	+/-25.8		+/-32.5							
Niobium-94	U	3.02	U	-0.0567	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-4.69		+/-3.98							
Niobium-95	U	1.33	U	-1.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.75		+/-4.67							
Potassium-40	U	-43.3	U	9.59	pCi/L	N/A		N/A			
	Uncertainty	+/-53.4		+/-55.9							
Promethium-144	U	0.0463	U	-1.5	pCi/L	N/A		N/A			
	Uncertainty	+/-3.90		+/-4.02							
Promethium-146	U	-0.355	U	1.26	pCi/L	N/A		N/A			
	Uncertainty	+/-4.12		+/-5.59							
Radium-228	U	-5.69	U	3.51	pCi/L	N/A		N/A			
	Uncertainty	+/-16.1		+/-20.9							
Ruthenium-106	U	6.58	U	26.4	pCi/L	N/A		N/A			
	Uncertainty	+/-27.8		+/-36.7							
Silver-110m	U	-1.6	U	-0.0595	pCi/L	N/A		N/A			
	Uncertainty	+/-3.32		+/-4.15							
Sodium-22	U	-3.67	U	-4.48	pCi/L	N/A		N/A			
	Uncertainty	+/-2.98		+/-4.85							
Thallium-208	U	2.94	U	5.44	pCi/L	N/A		N/A			
	Uncertainty	+/-5.31		+/-6.61							
Thorium-230	U	186	U	546	pCi/L	N/A		N/A			
	Uncertainty	+/-1400		+/-1320							
Thorium-234	U	-71.6	U	-189	pCi/L	N/A		N/A			
	Uncertainty	+/-227		+/-189							
Tin-113	U	1.29	U	0.171	pCi/L	N/A		N/A			
	Uncertainty	+/-4.19		+/-5.58							
Uranium-235	U	11.0	U	-4.91	pCi/L	N/A		N/A			
	Uncertainty	+/-27.9		+/-29.0							
Uranium-238	U	-71.6	U	-189	pCi/L	N/A		N/A			
	Uncertainty	+/-227		+/-189							
Yttrium-88	U	-2.01	U	1.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.39							
Zinc-65	U	-0.129	U	-7.59	pCi/L	N/A		N/A			
	Uncertainty	+/-8.76		+/-7.72							
Zirconium-95	U	1.06	U	-1.44	pCi/L	N/A		N/A			
	Uncertainty	+/-6.36		+/-7.76							
QC1203023715	LCS										
Actinium-228			U	-98.2	pCi/L					01/25/14	10:40
	Uncertainty			+/-280							
Americium-241	34500			37400	pCi/L		108	(75%-125%)			
	Uncertainty			+/-1150							
Antimony-124			U	17.5	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361919										
				+/-46.1							
Antimony-125			U	-3.52	pCi/L				RXF2	01/25/14	10:40
	Uncertainty			+/-158							
Barium-133			U	-5.43	pCi/L						
	Uncertainty			+/-83.1							
Barium-140			U	-5.81	pCi/L						
	Uncertainty			+/-28.1							
Beryllium-7			U	-241	pCi/L						
	Uncertainty			+/-495							
Bismuth-212			U	146	pCi/L						
	Uncertainty			+/-796							
Bismuth-214			U	69.2	pCi/L						
	Uncertainty			+/-109							
Cerium-139				658	pCi/L						
	Uncertainty			+/-85.6							
Cerium-141			U	32.7	pCi/L						
	Uncertainty			+/-78.9							
Cerium-144			U	335	pCi/L						
	Uncertainty			+/-390							
Cesium-134			U	-18.7	pCi/L						
	Uncertainty			+/-70.1							
Cesium-136			U	11.4	pCi/L						
	Uncertainty			+/-95.2							
Cesium-137	14200			14600	pCi/L		103	(75%-125%)			
	Uncertainty			+/-239							
Chromium-51			U	-411	pCi/L						
	Uncertainty			+/-459							
Cobalt-56			U	33.3	pCi/L						
	Uncertainty			+/-68.2							
Cobalt-57				2170	pCi/L						
	Uncertainty			+/-97.7							
Cobalt-58			U	10.6	pCi/L						
	Uncertainty			+/-73.3							
Cobalt-60	18600			18700	pCi/L		101	(75%-125%)			
	Uncertainty			+/-288							
Europium-152			U	-73.2	pCi/L						
	Uncertainty			+/-167							
Europium-154			U	15.8	pCi/L						
	Uncertainty			+/-99.6							
Europium-155			U	-55.1	pCi/L						
	Uncertainty			+/-218							
Iridium-192			U	31.6	pCi/L						
	Uncertainty			+/-53.5							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361919										
Iron-59			U	138	pCi/L						
	Uncertainty			+/-131							
Lead-210				4.46E+05	pCi/L				RXF2	01/25/14	10:40
	Uncertainty			+/-27500							
Lead-212			U	-1.7	pCi/L						
	Uncertainty			+/-101							
Lead-214			U	39.0	pCi/L						
	Uncertainty			+/-145							
Manganese-54			U	57.0	pCi/L						
	Uncertainty			+/-65.0							
Mercury-203			U	-0.10	pCi/L						
	Uncertainty			+/-53.7							
Neodymium-147			U	71.9	pCi/L						
	Uncertainty			+/-390							
Neptunium-239			U	277	pCi/L						
	Uncertainty			+/-631							
Niobium-94			U	10.3	pCi/L						
	Uncertainty			+/-52.4							
Niobium-95			U	-9.81	pCi/L						
	Uncertainty			+/-58.9							
Potassium-40			U	234	pCi/L						
	Uncertainty			+/-244							
Promethium-144			U	-26.2	pCi/L						
	Uncertainty			+/-51.5							
Promethium-146			U	5.63	pCi/L						
	Uncertainty			+/-77.4							
Radium-228			U	-98.2	pCi/L						
	Uncertainty			+/-280							
Ruthenium-106			U	-357	pCi/L						
	Uncertainty			+/-507							
Silver-110m				566	pCi/L						
	Uncertainty			+/-72.8							
Sodium-22			U	1.54	pCi/L						
	Uncertainty			+/-35.1							
Thallium-208			U	30.9	pCi/L						
	Uncertainty			+/-60.0							
Thorium-230				50800	pCi/L						
	Uncertainty			+/-29700							
Thorium-234			U	-8310	pCi/L						
	Uncertainty			+/-3880							
Tin-113				573	pCi/L						
	Uncertainty			+/-106							
Uranium-235			U	167	pCi/L						
	Uncertainty			+/-337							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Uranium-238			U	-8310	pCi/L						
	Uncertainty			+/-3880							
Yttrium-88				624	pCi/L				RXF2	01/25/14	10:40
	Uncertainty			+/-61.6							
Zinc-65				7570	pCi/L						
	Uncertainty			+/-334							
Zirconium-95			U	-49.7	pCi/L						
	Uncertainty			+/-103							
QC1203023713	MB										
Actinium-228			U	2.34	pCi/L					01/30/14	18:41
	Uncertainty			+/-8.48							
Americium-241			U	-7.42	pCi/L						
	Uncertainty			+/-11.7							
Antimony-124			U	2.48	pCi/L						
	Uncertainty			+/-3.44							
Antimony-125			U	-3.65	pCi/L						
	Uncertainty			+/-4.15							
Barium-133			U	-2.21	pCi/L						
	Uncertainty			+/-2.16							
Barium-140			U	-0.593	pCi/L						
	Uncertainty			+/-2.29							
Beryllium-7			U	-7.33	pCi/L						
	Uncertainty			+/-13.4							
Bismuth-212			U	32.3	pCi/L						
	Uncertainty			+/-28.6							
Bismuth-214			U	2.59	pCi/L						
	Uncertainty			+/-5.20							
Cerium-139			U	-1.68	pCi/L						
	Uncertainty			+/-1.46							
Cerium-141			U	-2.03	pCi/L						
	Uncertainty			+/-3.73							
Cerium-144			U	5.60	pCi/L						
	Uncertainty			+/-10.2							
Cesium-134			U	0.669	pCi/L						
	Uncertainty			+/-1.60							
Cesium-136			U	-0.621	pCi/L						
	Uncertainty			+/-2.70							
Cesium-137			U	-0.0384	pCi/L						
	Uncertainty			+/-1.72							
Chromium-51			U	0.944	pCi/L						
	Uncertainty			+/-16.0							
Cobalt-56			U	-0.435	pCi/L						
	Uncertainty			+/-1.80							
Cobalt-57			U	1.74	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Cobalt-58				+/-1.29							
			U	-0.476	pCi/L				RXF2	01/30/14	18:41
Cobalt-60	Uncertainty			+/-1.46							
			U	-0.611	pCi/L						
Europium-152	Uncertainty			+/-1.74							
			U	3.88	pCi/L						
Europium-154	Uncertainty			+/-4.91							
			U	-2.15	pCi/L						
Europium-155	Uncertainty			+/-4.67							
			U	4.46	pCi/L						
Iridium-192	Uncertainty			+/-5.80							
			U	-0.846	pCi/L						
Iron-59	Uncertainty			+/-1.67							
			U	-0.053	pCi/L						
Lead-210	Uncertainty			+/-3.05							
			U	125	pCi/L						
Lead-212	Uncertainty			+/-409							
			U	-3.9	pCi/L						
Lead-214	Uncertainty			+/-4.38							
			U	-1.79	pCi/L						
Manganese-54	Uncertainty			+/-5.54							
			U	-0.708	pCi/L						
Mercury-203	Uncertainty			+/-1.63							
			U	0.499	pCi/L						
Neodymium-147	Uncertainty			+/-1.70							
			U	-7.14	pCi/L						
Neptunium-239	Uncertainty			+/-15.6							
			U	-1.83	pCi/L						
Niobium-94	Uncertainty			+/-13.7							
			U	0.261	pCi/L						
Niobium-95	Uncertainty			+/-1.65							
			U	0.254	pCi/L						
Potassium-40	Uncertainty			+/-1.69							
			U	-6.44	pCi/L						
Promethium-144	Uncertainty			+/-26.8							
			U	-0.327	pCi/L						
Promethium-146	Uncertainty			+/-1.70							
			U	1.88	pCi/L						
Radium-228	Uncertainty			+/-2.07							
			U	2.34	pCi/L						
Ruthenium-106	Uncertainty			+/-8.48							
			U	-2.64	pCi/L						
	Uncertainty			+/-16.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Silver-110m			U	-1.75	pCi/L						
	Uncertainty			+/-1.60							
Sodium-22			U	-0.845	pCi/L				RXF2	01/30/14	18:41
	Uncertainty			+/-1.63							
Thallium-208			U	-1.27	pCi/L						
	Uncertainty			+/-2.56							
Thorium-230			U	-736	pCi/L						
	Uncertainty			+/-907							
Thorium-234			U	-15.9	pCi/L						
	Uncertainty			+/-134							
Tin-113			U	-1.22	pCi/L						
	Uncertainty			+/-2.10							
Uranium-235			U	-6.22	pCi/L						
	Uncertainty			+/-14.3							
Uranium-238			U	-15.9	pCi/L						
	Uncertainty			+/-134							
Yttrium-88			U	1.07	pCi/L						
	Uncertainty			+/-1.68							
Zinc-65			U	-0.601	pCi/L						
	Uncertainty			+/-4.24							
Zirconium-95			U	0.163	pCi/L						
	Uncertainty			+/-3.09							
<b>Rad Gas Flow</b>											
Batch	1362035										
QC1203024016	341588001	DUP									
Alpha			U	4.45	U	2.98	pCi/L	N/A		N/A JAOC	01/31/14 13:14
	Uncertainty			+/-3.44		+/-3.08					
Beta				22.9		15.7	pCi/L	37.1		(0% - 100%)	
	Uncertainty			+/-4.43		+/-3.04					
QC1203024019	LCS										
Alpha				123		136	pCi/L		110	(75%-125%)	01/31/14 13:14
	Uncertainty					+/-12.6					
Beta				457		491	pCi/L		108	(75%-125%)	
	Uncertainty					+/-17.8					
QC1203024015	MB										
Alpha			U	0.912		0.912	pCi/L				01/31/14 13:14
	Uncertainty					+/-2.58					
Beta			U	-0.831		-0.831	pCi/L				
	Uncertainty					+/-1.85					
QC1203024017	341588001	MS									
Alpha			494 U	4.45		521	pCi/L		106	(75%-125%)	01/31/14 13:14
	Uncertainty			+/-3.44		+/-56.2					
Beta			1830	22.9		2180	pCi/L		118	(75%-125%)	
	Uncertainty			+/-4.43		+/-81.5					
QC1203024018	341588001	MSD									

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1362035										
Alpha	494	U	4.45	496	pCi/L	4.98	100	(0%-20%)		01/31/14	13:14
	Uncertainty		+/-3.44	+/-53.3							
Beta	1830		22.9	1990	pCi/L	9.24	108	(0%-20%)	JAOC		
	Uncertainty		+/-4.43	+/-72.4							
Batch	1362036										
QC1203024025	341588016	DUP									
Alpha		U	1.67	U	2.30	pCi/L	N/A		N/A	JAOC	02/02/14 17:52
		Uncertainty	+/-2.83		+/-2.90						
Beta			11.6		9.11	pCi/L	24.3	(0% - 100%)			
		Uncertainty	+/-2.83		+/-2.45						
QC1203024028	LCS										
Alpha			123		132	pCi/L		107	(75%-125%)		02/02/14 18:28
			Uncertainty		+/-12.3						
Beta			457		504	pCi/L		110	(75%-125%)		
			Uncertainty		+/-17.9						
QC1203024024	MB										
Alpha				U	-3.84	pCi/L					02/02/14 17:49
					+/-1.29						
Beta				U	-0.028	pCi/L					
					+/-2.73						
QC1203024026	341588016	MS									
Alpha		U	1.67		597	pCi/L		121	(75%-125%)		02/05/14 12:52
		Uncertainty	+/-2.83		+/-56.2						
Beta			1830		1940	pCi/L		106	(75%-125%)		
		Uncertainty	+/-2.83		+/-71.1						
QC1203024027	341588016	MSD									
Alpha		U	1.67		526	pCi/L	12.7	106	(0%-20%)		02/02/14 17:52
		Uncertainty	+/-2.83		+/-52.7						
Beta			1830		2040	pCi/L	5.10	111	(0%-20%)		
		Uncertainty	+/-2.83		+/-72.9						
<b>Rad Liquid Scintillation</b>											
Batch	1361889										
QC1203023630	341588001	DUP									
Technetium-99		U	44.7	U	58.4	pCi/L	N/A		N/AMYM1		01/28/14 14:09
		Uncertainty	+/-136		+/-137						
QC1203023631	LCS										
Technetium-99			4340		4300	pCi/L		98.9	(75%-125%)		01/28/14 14:26
			Uncertainty		+/-274						
QC1203023629	MB										
Technetium-99				U	17.1	pCi/L					01/28/14 13:53
					+/-131						
Batch	1361891										
QC1203023636	341588016	DUP									
Technetium-99		U	50.6	U	-6.74	pCi/L	N/A		N/AMYM1		01/31/14 15:59
		Uncertainty	+/-111		+/-112						
QC1203023637	LCS										

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## QC Summary

Workorder: 341588

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1361891										
Technetium-99	4340			3940	pCi/L		90.6	(75%-125%)		01/31/14	09:53
	Uncertainty			+/-230							
QC1203023635	MB										
Technetium-99			U	-4.64	pCi/L				MYM1	01/31/14	15:42
	Uncertainty			+/-112							
Batch	1363711										
QC1203028445	341588005	DUP									
Technetium-99		180		246	pCi/L	30.8		(0% - 100%)	MYM1	02/04/14	08:18
	Uncertainty	+/-108		+/-111							
QC1203028446	LCS										
Technetium-99	4340			4290	pCi/L		98.7	(75%-125%)		02/04/14	08:34
	Uncertainty			+/-218							
QC1203028444	MB										
Technetium-99			U	126	pCi/L					02/04/14	08:02
	Uncertainty			+/-108							

### Notes:

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

The Qualifiers in this report are defined as follows:

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

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## QC Summary

Workorder: 341588

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

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**



**List of current GEL Certifications as of 12 February 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	RW-2		
Weather Conditions		Air Temperature	
Total Well Depth (TWD) =		31.25	
Depth To Groundwater (DGW) =		18.10	
Length Of Water Column (LWC) =		13.15	
1 Casing Volume (OCV) = LWC x	0.163	=	2.1
3 Casing Volumes =	6.4	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1st	2.1	4.2	6.4	Well Sample Time: 0950
TIME (24 HOUR SYSTEM)	0935	0940	0944	0949	Remarks:
pH (SU)	3.88	3.56	3.57	3.52	
WATER TEMPERATURE (°C.)	18.6	18.3	18.1	17.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	332.7	331.3	329.5	329	
TURBIDITY (SUBJECTIVE)*	7.000	0.74	38.2	55.7	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	W-26	Air Temperature	°C.
Weather Conditions			
Total Well Depth (TWD) =		32.00	
Depth To Groundwater (DGW) =		24.93	
Length Of Water Column (LWC) =		7.07	
1 Casing Volume (OCV) = LWC x	0.163	=	1.2 gal.
3 Casing Volumes =	3.5	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation	(TB) SSB	WW	GP Other
Method of Sample Collection	(TB) SSB	WW	GP Other

### Evacuation and Collection Methods

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

### Constants for Casing Diameters

1.5" = 0.092      5" = 1.02  
2" = 0.163      6" = 1.47  
3" = 0.367      7" = 2.00  
4" = 0.652      8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	1.2	2.4	3.6	Well Sample Time: 1042
TIME (24 HOUR SYSTEM)	1032	1036	1040	Remarks:
pH (SU)	5.17	5.18	5.14	
WATER TEMPERATURE (°C.)	14.6	14.3	14.0	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	163.9	157	152.3	
TURBIDITY (SUBJECTIVE)*	178	113	51	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	MW-41		
Weather Conditions		Air Temperature	
Total Well Depth (TWD) = 27.05			
Depth To Groundwater (DGW) = 15.34			
Length Of Water Column (LWC) = 11.71			
1 Casing Volume (OCV) = LWC x	0.163	=	1.9 gal.
3 Casing Volumes =	5.7		gal. = Standard Evacuation Volume
Total Volume of Water Removed =			
Method of Well Evacuation	(TB)	SSB	WW GP Other
Method of Sample Collection	(TB)	SSB	WW GP Other

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1.9	3.8	5.7	Well Sample Time: 10/5
TIME (24 HOUR SYSTEM)	1604	1007	1010	Remarks:
pH (SU)	5.05	5.16	5.23	
WATER TEMPERATURE (°C.)	18	18.5	19.4	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	482	490	491	
TURBIDITY (SUBJECTIVE)*	71660	43	57.6	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 4, 2014		Casing Diameter:	2 inches	Casing Material:	PVC - Metal
Field Personnel	BTF		Guard Pipe:	PVC - Metal	Locking Cap:	Y - N
Facility Name	Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #	W-48		Well Yield:	Low - Mod. - High		
Weather Conditions	Air Temperature		Remarks:			
Total Well Depth (TWD) =	44.00					
Depth To Groundwater (DGW) =	25.87					
Length Of Water Column (LWC) =	18.16					
1 Casing Volume (OCV) = LWC x $\frac{\pi}{4} \times \text{ID}^2 \times \text{Length}$	0.652 = 11.8 gal.					
3 Casing Volumes =	35.4 gal. = Standard Evacuation Volume					
Total Volume of Water Removed =						
Method of Well Evacuation	TB	SSB	WW	GP	Other	
Method of Sample Collection	TB	SSB	WW	GP	Other	

## Evacuation and Collection Methods

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

## Constants for Casing Diameters

1.5" = 0.092  
2" = 0.163  
3" = 0.367  
4" = 0.652  
5" = 1.02  
6" = 1.47  
7" = 2.00  
8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	1.5	11.8	23.6		Well Sample Time:	1120
TIME (24 HOUR SYSTEM)	1100	1106	1114		Remarks:	
pH (SU)	5.11	5.12	5.19			017 C 236
WATER TEMPERATURE (°C.)	21.1	20.8	21.3			
SPECIFIC CONDUCTIVITY (UMHOS/CM)	125.8	120.2	107.6			
TURBIDITY (SUBJECTIVE)*	151	16.6	18.7			
ODOR (SUBJECTIVE)**	1	1	1			

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Quarterly GWM

Lot Number: PD04066  
Date Completed: 04/09/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PDO4066 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

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## Case Narrative

### Westinghouse Electric Company

Lot Number: PD04066

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: PD04066

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	04/04/2014 0950	04/04/2014
002	W-26	Aqueous	04/04/2014 1042	04/04/2014
003	MW-41	Aqueous	04/04/2014 1015	04/04/2014
004	W-48	Aqueous	04/04/2014 1120	04/04/2014

(4 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PD04066

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	110		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	8.4		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	170		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	23		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.2		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	2.9		ug/L	22

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 04/04/2014 0950	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/04/2014 0950	BTF		
1		(Specific Con) 120.1	1	04/04/2014 0950	BTF		
1		(Temperature ) SM 2550B-2010	1	04/04/2014 0950	BTF		
1		(Water level )	1	04/04/2014 0950	BTF		
1		(Well Depth)	1	04/04/2014 0950	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	3.52			su	1
Specific Conductance @ 25° C - Field		120.1	329		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.9			° C	1
Water level depth from top of casing		No Method	18.10			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/04/2014 0950							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1748	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/04/2014 0950							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1748	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	110		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	8.4		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 04/04/2014 0950

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1328	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 04/04/2014 0950

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1328	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		90	41-144
2-Fluorobiphenyl		94	37-129
2-Fluorophenol		86	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		89	28-128
Terphenyl-d14		71	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-002
Description: W-26	Matrix: Aqueous
Date Sampled: 04/04/2014 1042	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/04/2014 1042	BTF		
1		(Specific Con) 120.1	1	04/04/2014 1042	BTF		
1		(Temperature ) SM 2550B-2010	1	04/04/2014 1042	BTF		
1		(Water level )	1	04/04/2014 1042	BTF		
1		(Well Depth)	1	04/04/2014 1042	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.11			su	1
Specific Conductance @ 25° C - Field		120.1	153		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.8			° C	1
Water level depth from top of casing		No Method	24.93			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/04/2014 1042							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1725	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/04/2014 1042							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1725	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-002

Description: W-26

Matrix: Aqueous

Date Sampled: 04/04/2014 1042

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1352	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-002

Description: W-26

Matrix: Aqueous

Date Sampled: 04/04/2014 1042

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1352	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		98	41-144
2-Fluorobiphenyl		99	37-129
2-Fluorophenol		90	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		93	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 04/04/2014 1015	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	04/04/2014 1015	BTF		
1	(Specific Con)	120.1	1	04/04/2014 1015	BTF		
1	(Temperature )	SM 2550B-2010	1	04/04/2014 1015	BTF		
1	(Water level )		1	04/04/2014 1015	BTF		
1	(Well Depth)		1	04/04/2014 1015	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	18.9			su	1
Specific Conductance @ 25° C - Field		120.1	491		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.9			° C	1
Water level depth from top of casing		No Method	15.34			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/04/2014 1015							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0254	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/04/2014 1015							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0254	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	23		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 04/04/2014 1015

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1415	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 04/04/2014 1015

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1415	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		87	41-144
2-Fluorobiphenyl		96	37-129
2-Fluorophenol		84	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		89	28-128
Terphenyl-d14		89	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	04/04/2014 1120	BTF		
1		(Specific Con) 120.1	1	04/04/2014 1120	BTF		
1	(Temperature )	SM 2550B-2010	1	04/04/2014 1120	BTF		
1		(Water level )	1	04/04/2014 1120	BTF		
1		(Well Depth)	1	04/04/2014 1120	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.19			su	1
Specific Conductance @ 25° C - Field		120.1	108		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.3			° C	1
Water level depth from top of casing		No Method	25.84			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/04/2014 1120							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0118	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.2		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/04/2014 1120							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0118	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		105	70-130

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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1438	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1438	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		84	38-127
Phenol-d5		87	28-128
Terphenyl-d14		93	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 24 of 24

Level 1 Report v2.1

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shalaby.com

Number 25879

[illegible]

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 14

Page 1 of 1  
Replaces Date: 09/26/13  
Effective Date: 03/07/14

## Sample Receipt Checklist (SRC)

Client: Wilmington Cooler Inspected by/date: EC 4/4/14 Lot #: PD6466

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.5 11.6</u> °C / <u>6</u> °C / / °C / / °C <u>+0.1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of >2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>EC</u> Verified by: <u>EC</u> Date: <u>4/4/14</u>		

Comments:





May 14, 2014

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

Re: Environmental 2014 - PO 4500633068  
Work Order: 346376

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

346376

VENDOR: General Engineering Laboratories (GEL)Month: AprilYear: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C. 29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/4/14 09:50	1000	X	X	X		X	REC
WELL	#3A	4/8/14 09:22	1000	X	X	X		X	REC
WELL	#7	4/3/14 11:50	1000	X	X	X		X	REC
WELL	#10	4/3/14 14:26	1000	X	X	X		X	REC
WELL	#13R	4/3/14 11:26	1000	X	X	X		X	REC
WELL	#14	4/4/14 14:00	1000	X	X	X		X	REC
WELL	#15	4/4/14 12:22	1000	X	X	X		X	REC
WELL	#16	4/4/14 14:18	1000	X	X	X		X	REC
WELL	#17	4/8/14 11:30	1000	X	X	X		X	REC
WELL	#18	4/3/14 10:27	1000	X	X	X		X	REC
WELL	#20	4/8/14 10:05	1000	X	X	X		X	REC
WELL	#22	4/3/14 10:07	1000	X	X	X		X	REC
WELL	#23R	4/4/14 13:35	1000	X	X	X		X	REC
WELL	#24	4/4/14 08:49	1000	X	X	X		X	REC
WELL	#26	4/4/14 10:42	1000	X	X	X		X	REC
WELL	#27	4/8/14 09:42	1000	X	X	X		X	REC
WELL	#28	4/3/14 11:00	1000	X	X	X		X	REC
WELL	#29	4/3/14 09:30	1000	X	X	X		X	REC
WELL	#30	4/3/14 09:47	1000	X	X	X		X	REC
WELL	#32	4/3/14 14:50	1000	X	X	X		X	REC
WELL	#33	4/4/14 08:28	1000	X	X	X		X	REC
WELL	#38	4/3/14 09:06	1000	X	X	X		X	REC
WELL	#39	4/8/14 11:53	1000	X	X	X		X	REC
WELL	#41R	4/4/14 10:15	1000	X	X	X		X	REC
WELL	#43	4/8/14 12:10	1000	X	X	X		X	REC

Please email [crewsr@westinghouse.com](mailto:crewsr@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 4/9/14

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.



## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>346376</u>	
Received By: <u>Ricky Albee</u>		Date Received: <u>4/9/14</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags    Blue ice    Dry ice <u>alone</u> Other (describe) <u>22°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>To be filled/preserved in lab</u> If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			<u>RA 4/9/14</u>
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground    UPS    Field Services <u>Courier</u> Other <u>GEL</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 346376 GEL Work Order: 346376

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 346376001  
Matrix: Ground Water  
Collect Date: 04-APR-14 09:50  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.07	+/-23.2	35.8		pCi/L		MJH1	04/15/14	1410 1379234	1
Americium-241	U	0.904	+/-28.3	44.0		pCi/L					
Antimony-124	U	0.828	+/-10.1	19.9		pCi/L					
Antimony-125	U	-0.631	+/-10.2	18.6		pCi/L					
Barium-133	U	-3.18	+/-5.00	8.26		pCi/L					
Barium-140	U	11.3	+/-9.31	20.6		pCi/L					
Beryllium-7	U	-5.16	+/-35.5	64.1		pCi/L					
Bismuth-212	U	14.9	+/-65.1	114		pCi/L					
Bismuth-214	U	14.1	+/-12.3	18.4		pCi/L					
Cerium-139	U	1.06	+/-3.50	6.34		pCi/L					
Cerium-141	U	-2.81	+/-8.53	12.3		pCi/L					
Cerium-144	U	-7.7	+/-22.6	40.1		pCi/L					
Cesium-134	U	-1.28	+/-4.41	7.68		pCi/L					
Cesium-136	U	1.53	+/-9.71	18.4		pCi/L					
Cesium-137	U	1.97	+/-3.91	7.47	10.0	pCi/L					
Chromium-51	U	-13.9	+/-42.6	72.6		pCi/L					
Cobalt-56	U	2.61	+/-4.28	8.48		pCi/L					
Cobalt-57	U	1.02	+/-3.06	5.62		pCi/L					
Cobalt-58	U	-2.08	+/-4.04	6.84		pCi/L					
Cobalt-60	U	3.28	+/-4.09	8.58		pCi/L					
Europium-152	U	-7.44	+/-12.3	20.4		pCi/L					
Europium-154	U	-3.63	+/-12.7	22.6		pCi/L					
Europium-155	U	-8.4	+/-14.3	23.3		pCi/L					
Iridium-192	U	-4.48	+/-4.05	6.49		pCi/L					
Iron-59	U	-0.829	+/-7.52	14.1		pCi/L					
Lead-210	U	-39.8	+/-1030	1630		pCi/L					
Lead-212	U	12.3	+/-11.7	12.9		pCi/L					
Lead-214	U	-14.6	+/-11.2	15.4		pCi/L					
Manganese-54	U	4.66	+/-4.21	8.58		pCi/L					
Mercury-203	U	-4.38	+/-4.47	7.31		pCi/L					
Neodymium-147	U	-28.8	+/-46.5	80.2		pCi/L					
Neptunium-239	U	-10.3	+/-32.9	58.7		pCi/L					
Niobium-94	U	-4.3	+/-4.77	6.92		pCi/L					
Niobium-95	U	0.320	+/-3.98	7.26		pCi/L					
Potassium-40	UI	0.00	+/-63.9	56.4		pCi/L					
Promethium-144	U	1.87	+/-4.25	7.88		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 346376001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.98	+/-4.93	9.26	pCi/L
Radium-228	U	8.07	+/-23.2	35.8	pCi/L
Ruthenium-106	U	11.4	+/-35.7	66.6	pCi/L
Silver-110m	U	0.286	+/-3.19	5.92	pCi/L
Sodium-22	U	-1.21	+/-4.47	8.01	pCi/L
Thallium-208	U	5.89	+/-7.31	7.71	pCi/L
Thorium-230	U	-2030	+/-1820	2550	pCi/L
Thorium-234	U	82.0	+/-371	368	pCi/L
Tin-113	U	1.74	+/-4.83	9.12	pCi/L
Uranium-235	U	1.97	+/-30.2	44.3	pCi/L
Uranium-238	U	82.0	+/-371	368	pCi/L
Yttrium-88	U	-0.109	+/-4.99	9.60	pCi/L
Zinc-65	U	-4.01	+/-8.02	14.0	pCi/L
Zirconium-95	U	4.10	+/-7.39	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.66	+/-0.937	1.08	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	14.8	+/-1.75	2.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-0.663	+/-114	200	300	pCi/L	MYM1	04/21/14	0850	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	346376002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 09:22		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.08	+/-16.1	27.3		pCi/L		MJH1	04/15/14	1410 1379234	1
Americium-241	U	-23.5	+/-23.6	36.5		pCi/L					
Antimony-124	U	5.06	+/-9.85	20.0		pCi/L					
Antimony-125	U	5.09	+/-9.19	17.3		pCi/L					
Barium-133	U	-0.807	+/-4.67	7.37		pCi/L					
Barium-140	U	0.759	+/-4.88	9.93		pCi/L					
Beryllium-7	U	-8.04	+/-28.3	49.8		pCi/L					
Bismuth-212	U	-43.1	+/-66.2	93.8		pCi/L					
Bismuth-214	UI	0.00	+/-14.4	26.7		pCi/L					
Cerium-139	U	-2.21	+/-3.84	5.56		pCi/L					
Cerium-141	U	-3.63	+/-6.55	10.2		pCi/L					
Cerium-144	U	2.15	+/-20.4	36.2		pCi/L					
Cesium-134	U	-2.01	+/-3.71	5.54		pCi/L					
Cesium-136	U	3.79	+/-7.27	13.1		pCi/L					
Cesium-137	U	-0.757	+/-3.48	6.06	10.0	pCi/L					
Chromium-51	U	-23.1	+/-31.0	53.9		pCi/L					
Cobalt-56	U	-0.15	+/-3.76	6.91		pCi/L					
Cobalt-57	U	1.82	+/-2.59	4.77		pCi/L					
Cobalt-58	U	1.62	+/-3.52	6.83		pCi/L					
Cobalt-60	U	-0.571	+/-2.72	5.26		pCi/L					
Europium-152	U	3.50	+/-10.9	17.7		pCi/L					
Europium-154	U	1.26	+/-10.7	20.8		pCi/L					
Europium-155	U	-0.86	+/-11.2	19.9		pCi/L					
Iridium-192	U	1.53	+/-3.43	6.42		pCi/L					
Iron-59	U	-7.03	+/-7.21	11.6		pCi/L					
Lead-210	U	272	+/-756	1310		pCi/L					
Lead-212		11.8	+/-8.66	9.82		pCi/L					
Lead-214		71.0	+/-18.4	12.3		pCi/L					
Manganese-54	U	0.0322	+/-3.24	6.04		pCi/L					
Mercury-203	U	-5.31	+/-4.42	6.25		pCi/L					
Neodymium-147	U	-18.3	+/-33.5	57.1		pCi/L					
Neptunium-239	U	-11.8	+/-28.1	49.0		pCi/L					
Niobium-94	U	3.11	+/-3.18	6.41		pCi/L					
Niobium-95	UI	0.00	+/-4.35	5.99		pCi/L					
Potassium-40	U	-19.8	+/-50.7	81.0		pCi/L					
Promethium-144	U	-0.708	+/-3.65	5.90		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 346376002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.88	+/-4.26	7.94	pCi/L
Radium-228	U	1.08	+/-16.1	27.3	pCi/L
Ruthenium-106	U	-4.53	+/-29.4	51.7	pCi/L
Silver-110m	U	0.539	+/-3.27	5.93	pCi/L
Sodium-22	U	1.33	+/-3.65	7.34	pCi/L
Thallium-208		8.84	+/-5.24	4.35	pCi/L
Thorium-230	U	-1440	+/-1700	2420	pCi/L
Thorium-234	U	161	+/-361	400	pCi/L
Tin-113	U	3.59	+/-5.14	7.43	pCi/L
Uranium-235	U	-8.13	+/-25.4	40.1	pCi/L
Uranium-238	U	161	+/-361	400	pCi/L
Yttrium-88	U	-2.25	+/-4.85	8.48	pCi/L
Zinc-65	U	8.11	+/-8.36	15.5	pCi/L
Zirconium-95	U	-0.973	+/-5.74	10.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.32	+/-0.791	1.00	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	0.896	+/-1.42	2.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	7.35	+/-116	203	300	pCi/L	MYM1	04/21/14	0907	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	346376003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 11:50		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.3	+/-17.1	29.7		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	5.02	+/-15.6	25.8		pCi/L					
Antimony-124	U	-6.92	+/-11.6	16.1		pCi/L					
Antimony-125	U	-4.24	+/-11.0	16.4		pCi/L					
Barium-133	U	-2.87	+/-4.86	7.20		pCi/L					
Barium-140	U	-6.15	+/-8.03	13.4		pCi/L					
Beryllium-7	U	-16.1	+/-32.2	51.3		pCi/L					
Bismuth-212	U	26.0	+/-50.6	87.3		pCi/L					
Bismuth-214	U	2.41	+/-13.4	12.3		pCi/L					
Cerium-139	U	-1.09	+/-3.25	4.84		pCi/L					
Cerium-141	U	-3.19	+/-5.66	9.49		pCi/L					
Cerium-144	U	2.38	+/-19.1	33.4		pCi/L					
Cesium-134	U	-0.196	+/-3.25	6.02		pCi/L					
Cesium-136	U	-2.54	+/-8.03	14.1		pCi/L					
Cesium-137	U	1.89	+/-4.88	8.27	10.0	pCi/L					
Chromium-51	U	7.80	+/-32.8	60.1		pCi/L					
Cobalt-56	U	-5.42	+/-3.75	5.79		pCi/L					
Cobalt-57	U	-0.592	+/-2.47	4.26		pCi/L					
Cobalt-58	U	0.0411	+/-3.35	6.22		pCi/L					
Cobalt-60	U	-1.42	+/-3.15	5.69		pCi/L					
Europium-152	U	5.32	+/-9.06	17.0		pCi/L					
Europium-154	U	-1.95	+/-9.57	17.8		pCi/L					
Europium-155	U	4.51	+/-10.4	18.7		pCi/L					
Iridium-192	U	-1.83	+/-3.41	5.93		pCi/L					
Iron-59	U	2.96	+/-8.14	13.8		pCi/L					
Lead-210	U	425	+/-605	575		pCi/L					
Lead-212	U	3.68	+/-9.66	12.5		pCi/L					
Lead-214	U	9.06	+/-10.3	13.6		pCi/L					
Manganese-54	U	2.96	+/-3.38	6.73		pCi/L					
Mercury-203	U	-2.44	+/-5.00	7.13		pCi/L					
Neodymium-147	U	-3.01	+/-39.8	70.7		pCi/L					
Neptunium-239	U	3.53	+/-25.6	45.1		pCi/L					
Niobium-94	U	-0.122	+/-3.39	6.20		pCi/L					
Niobium-95	U	0.0189	+/-3.58	6.61		pCi/L					
Potassium-40	U	-42.3	+/-49.3	81.0		pCi/L					
Promethium-144	U	-0.525	+/-3.53	6.38		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 346376003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.45	+/-4.03	7.41	pCi/L
Radium-228	U	17.3	+/-17.1	29.7	pCi/L
Ruthenium-106	U	7.28	+/-31.5	52.9	pCi/L
Silver-110m	U	-4.17	+/-3.50	5.79	pCi/L
Sodium-22	U	-0.578	+/-3.39	6.34	pCi/L
Thallium-208	U	3.56	+/-5.67	6.27	pCi/L
Thorium-230	U	41.2	+/-1190	1770	pCi/L
Thorium-234	U	86.8	+/-204	255	pCi/L
Tin-113	U	0.779	+/-4.13	7.52	pCi/L
Uranium-235	U	-16	+/-22.1	34.2	pCi/L
Uranium-238	U	86.8	+/-204	255	pCi/L
Yttrium-88	U	-5.12	+/-3.89	5.34	pCi/L
Zinc-65	U	-0.826	+/-6.55	11.9	pCi/L
Zirconium-95	U	-0.466	+/-6.29	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.23	+/-1.93	2.31	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	127	+/-3.68	2.83	5.00	pCi/L					
Alpha	U	3.85	+/-3.26	4.88	5.00	pCi/L	DXG3	05/06/14	1208	1382543
Beta	120	+/-6.38	3.65	5.00	pCi/L					3

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	299	+/-109	169	300	pCi/L	MYM1	04/29/14	0915	1382434	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	346376003	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	346376004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 14:26		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-30.3	+/-18.9	24.5		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	18.2	+/-33.0	53.7		pCi/L					
Antimony-124	U	-2.8	+/-8.75	16.1		pCi/L					
Antimony-125	U	2.09	+/-9.61	17.8		pCi/L					
Barium-133	U	-3.46	+/-5.17	7.64		pCi/L					
Barium-140	U	-3.9	+/-8.47	15.0		pCi/L					
Beryllium-7	U	-0.243	+/-36.5	66.1		pCi/L					
Bismuth-212	U	25.2	+/-52.8	100		pCi/L					
Bismuth-214	U	-5.03	+/-10.9	16.1		pCi/L					
Cerium-139	U	-0.236	+/-3.42	5.90		pCi/L					
Cerium-141	U	-1.07	+/-6.85	11.8		pCi/L					
Cerium-144	U	-6.03	+/-24.0	39.9		pCi/L					
Cesium-134	U	0.426	+/-4.10	7.54		pCi/L					
Cesium-136	U	0.974	+/-9.22	17.6		pCi/L					
Cesium-137	U	-0.227	+/-4.04	7.29	10.0	pCi/L					
Chromium-51	U	0.799	+/-40.3	73.3		pCi/L					
Cobalt-56	U	1.08	+/-4.27	7.91		pCi/L					
Cobalt-57	U	1.10	+/-3.09	5.51		pCi/L					
Cobalt-58	U	-2.73	+/-4.69	6.66		pCi/L					
Cobalt-60	U	1.69	+/-4.66	9.08		pCi/L					
Europium-152	U	0.413	+/-12.9	20.4		pCi/L					
Europium-154	U	-7.16	+/-12.1	17.5		pCi/L					
Europium-155	U	3.84	+/-13.8	24.5		pCi/L					
Iridium-192	U	-0.585	+/-3.90	7.03		pCi/L					
Iron-59	U	-0.972	+/-8.62	16.1		pCi/L					
Lead-210	U	320	+/-1840	1250		pCi/L					
Lead-212	U	1.32	+/-10.2	12.1		pCi/L					
Lead-214	U	12.1	+/-12.6	17.5		pCi/L					
Manganese-54	U	1.63	+/-3.91	7.35		pCi/L					
Mercury-203	U	4.05	+/-4.36	7.92		pCi/L					
Neodymium-147	U	19.6	+/-51.9	97.1		pCi/L					
Neptunium-239	U	-27	+/-34.6	58.1		pCi/L					
Niobium-94	U	-2.28	+/-3.50	5.92		pCi/L					
Niobium-95	U	1.17	+/-4.02	7.50		pCi/L					
Potassium-40	U	39.8	+/-49.8	100		pCi/L					
Promethium-144	U	0.222	+/-4.00	7.22		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10  
Sample ID: 346376004

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.204	+/-4.84	8.75	pCi/L
Radium-228	U	-30.3	+/-18.9	24.5	pCi/L
Ruthenium-106	U	31.3	+/-33.3	65.7	pCi/L
Silver-110m	U	-0.223	+/-3.54	6.42	pCi/L
Sodium-22	U	-2.4	+/-4.28	6.23	pCi/L
Thallium-208	U	2.89	+/-5.56	8.42	pCi/L
Thorium-230	UI	0.00	+/-2840	3240	pCi/L
Thorium-234	U	147	+/-347	433	pCi/L
Tin-113	U	0.897	+/-4.63	8.57	pCi/L
Uranium-235	U	22.7	+/-27.9	43.6	pCi/L
Uranium-238	U	147	+/-347	433	pCi/L
Yttrium-88	U	-1.01	+/-4.90	9.04	pCi/L
Zinc-65	U	1.07	+/-8.74	16.6	pCi/L
Zirconium-95	U	3.63	+/-6.88	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.26	+/-1.95	2.73	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		66.7	+/-2.52	1.74	5.00	pCi/L					
Alpha	U	1.74	+/-2.75	4.83	5.00	pCi/L	DXG3	05/06/14	1208	1382543	3
Beta		66.7	+/-4.83	3.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	109	+/-120	201	300	pCi/L	MYM1	04/21/14	0940	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 10  
Sample ID: 346376004

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 346376005  
Matrix: Ground Water  
Collect Date: 03-APR-14 11:26  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.65	+/-26.6	38.5		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	-1.47	+/-6.56	9.87		pCi/L					
Antimony-124	U	4.35	+/-12.0	24.1		pCi/L					
Antimony-125	U	5.91	+/-11.1	21.0		pCi/L					
Barium-133	U	0.311	+/-5.04	8.22		pCi/L					
Barium-140	U	-1.93	+/-10.5	17.0		pCi/L					
Beryllium-7	U	66.8	+/-131	68.7		pCi/L					
Bismuth-212	U	49.5	+/-62.1	125		pCi/L					
Bismuth-214	U	16.9	+/-19.5	21.2		pCi/L					
Cerium-139	U	-0.257	+/-2.86	5.02		pCi/L					
Cerium-141	U	-4.85	+/-6.17	9.43		pCi/L					
Cerium-144	U	8.50	+/-17.7	32.4		pCi/L					
Cesium-134	U	2.87	+/-4.91	9.56		pCi/L					
Cesium-136	U	-6.76	+/-10.4	17.7		pCi/L					
Cesium-137	U	-1.23	+/-4.57	7.93	10.0	pCi/L					
Chromium-51	U	17.9	+/-37.8	71.6		pCi/L					
Cobalt-56	U	-1.77	+/-4.70	8.43		pCi/L					
Cobalt-57	U	-0.655	+/-2.09	3.69		pCi/L					
Cobalt-58	U	7.18	+/-18.5	8.07		pCi/L					
Cobalt-60	U	-0.312	+/-5.13	8.55		pCi/L					
Europium-152	U	0.536	+/-10.4	19.2		pCi/L					
Europium-154	U	2.09	+/-12.9	24.8		pCi/L					
Europium-155	U	-0.559	+/-10.0	15.8		pCi/L					
Iridium-192	U	1.91	+/-3.67	6.99		pCi/L					
Iron-59	U	2.21	+/-9.99	19.1		pCi/L					
Lead-210	U	-45	+/-92.7	145		pCi/L					
Lead-212	U	3.20	+/-9.56	10.9		pCi/L					
Lead-214	U	15.8	+/-13.3	17.9		pCi/L					
Manganese-54	U	1.83	+/-4.23	8.31		pCi/L					
Mercury-203	U	0.133	+/-3.83	6.63		pCi/L					
Neodymium-147	U	44.8	+/-51.6	102		pCi/L					
Neptunium-239	U	13.6	+/-22.6	41.9		pCi/L					
Niobium-94	U	-0.531	+/-4.46	7.79		pCi/L					
Niobium-95	U	-0.226	+/-4.40	8.26		pCi/L					
Potassium-40	U	-21.9	+/-60.1	102		pCi/L					
Promethium-144	U	-1.13	+/-4.86	8.36		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 346376005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.20	+/-4.59	8.75	pCi/L
Radium-228	U	7.65	+/-26.6	38.5	pCi/L
Ruthenium-106	U	-12.6	+/-42.5	73.5	pCi/L
Silver-110m	U	3.22	+/-3.97	7.79	pCi/L
Sodium-22	U	0.196	+/-4.60	8.67	pCi/L
Thallium-208	U	-5.3	+/-5.80	9.02	pCi/L
Thorium-230	U	806	+/-740	962	pCi/L
Thorium-234	U	40.8	+/-112	142	pCi/L
Tin-113	U	-2.22	+/-5.28	9.30	pCi/L
Uranium-235	U	0.748	+/-20.9	33.8	pCi/L
Uranium-238	U	40.8	+/-112	142	pCi/L
Yttrium-88	U	-4.07	+/-5.89	9.90	pCi/L
Zinc-65	U	-9.53	+/-10.2	16.5	pCi/L
Zirconium-95	U	1.71	+/-8.24	15.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.16	+/-0.946	1.46	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		120	+/-3.30	1.92	5.00	pCi/L					
Alpha	U	1.15	+/-2.53	4.64	5.00	pCi/L	DXG3	05/06/14	1208	1382543	3
Beta		110	+/-5.96	3.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	191	+/-123	200	300	pCi/L	MYM1	04/21/14	0956	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)

Notes:



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R  
Sample ID: 346376005

Project: WNUC00127  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	346376006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 14:00		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.4	+/-16.9	29.4		pCi/L		MJH1	04/15/14	1412 1379234	1
Americium-241	U	5.13	+/-11.4	18.7		pCi/L					
Antimony-124	U	1.39	+/-6.59	13.4		pCi/L					
Antimony-125	U	-5.95	+/-7.85	13.5		pCi/L					
Barium-133	U	-2.76	+/-4.91	7.40		pCi/L					
Barium-140	U	-10.3	+/-8.52	9.70		pCi/L					
Beryllium-7	U	-13.1	+/-30.9	54.1		pCi/L					
Bismuth-212	U	32.3	+/-64.1	78.6		pCi/L					
Bismuth-214		20.7	+/-10.2	11.5		pCi/L					
Cerium-139	U	1.09	+/-2.93	5.21		pCi/L					
Cerium-141	U	0.312	+/-6.07	9.88		pCi/L					
Cerium-144	U	-3.54	+/-20.7	33.6		pCi/L					
Cesium-134	U	0.692	+/-3.58	6.56		pCi/L					
Cesium-136	U	-2.13	+/-6.78	12.3		pCi/L					
Cesium-137	U	-2.27	+/-3.75	6.09	10.0	pCi/L					
Chromium-51	U	15.7	+/-35.8	63.2		pCi/L					
Cobalt-56	U	-1.95	+/-3.54	5.99		pCi/L					
Cobalt-57	U	0.106	+/-2.42	4.28		pCi/L					
Cobalt-58	U	5.33	+/-3.23	5.61		pCi/L					
Cobalt-60	U	1.74	+/-4.43	6.46		pCi/L					
Europium-152	U	-3.08	+/-9.40	15.8		pCi/L					
Europium-154	U	-6.91	+/-8.00	13.3		pCi/L					
Europium-155	U	1.85	+/-11.4	18.4		pCi/L					
Iridium-192	U	1.38	+/-3.56	6.28		pCi/L					
Iron-59	U	-3.16	+/-6.87	12.2		pCi/L					
Lead-210	U	-256	+/-255	362		pCi/L					
Lead-212	U	4.14	+/-7.93	12.0		pCi/L					
Lead-214	U	4.04	+/-12.7	12.8		pCi/L					
Manganese-54	U	-1.59	+/-3.86	5.60		pCi/L					
Mercury-203	U	1.78	+/-3.48	6.21		pCi/L					
Neodymium-147	U	-24.8	+/-40.8	70.3		pCi/L					
Neptunium-239	U	-6.43	+/-26.0	45.4		pCi/L					
Niobium-94	U	-0.0614	+/-3.25	5.80		pCi/L					
Niobium-95	U	0.353	+/-3.64	6.57		pCi/L					
Potassium-40	U	-17.7	+/-53.1	81.4		pCi/L					
Promethium-144	U	1.27	+/-3.36	6.19		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 14  
Sample ID: 346376006

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.330	+/-3.81	6.98	pCi/L
Radium-228	U	19.4	+/-16.9	29.4	pCi/L
Ruthenium-106	U	23.0	+/-28.9	55.6	pCi/L
Silver-110m	U	-0.228	+/-3.00	5.39	pCi/L
Sodium-22	U	-2.43	+/-2.82	4.68	pCi/L
Thallium-208	U	-0.412	+/-4.18	6.79	pCi/L
Thorium-230	U	306	+/-1040	1420	pCi/L
Thorium-234	U	86.0	+/-166	207	pCi/L
Tin-113	U	-1.53	+/-3.93	6.98	pCi/L
Uranium-235	U	-28.2	+/-24.5	33.1	pCi/L
Uranium-238	U	86.0	+/-166	207	pCi/L
Yttrium-88	U	0.363	+/-3.11	6.38	pCi/L
Zinc-65	U	7.50	+/-5.84	12.1	pCi/L
Zirconium-95	U	0.855	+/-6.16	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.20	+/-0.835	0.781	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	9.21	+/-1.18	1.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	58.6	+/-120	205	300	pCi/L	MYM1	04/21/14	1013	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	346376007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 12:22		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-19.3	+/-16.8	24.6		pCi/L		MJH1	04/15/14	1412	1379234	1
Americium-241	U	2.01	+/-11.0	17.7		pCi/L						
Antimony-124	U	2.67	+/-7.94	15.8		pCi/L						
Antimony-125	U	5.30	+/-8.79	16.1		pCi/L						
Barium-133	U	4.18	+/-4.03	6.93		pCi/L						
Barium-140	U	-1.99	+/-6.63	11.9		pCi/L						
Beryllium-7	U	9.25	+/-28.2	50.9		pCi/L						
Bismuth-212	U	31.4	+/-44.9	86.3		pCi/L						
Bismuth-214		18.4	+/-13.0	12.0		pCi/L						
Cerium-139	U	-0.869	+/-2.83	4.73		pCi/L						
Cerium-141	U	0.934	+/-5.52	9.09		pCi/L						
Cerium-144	U	8.18	+/-18.2	32.0		pCi/L						
Cesium-134	U	2.12	+/-3.33	5.85		pCi/L						
Cesium-136	U	-12.2	+/-9.78	11.3		pCi/L						
Cesium-137	U	-0.601	+/-3.57	5.59	10.0	pCi/L						
Chromium-51	U	-2.23	+/-32.4	53.3		pCi/L						
Cobalt-56	U	0.452	+/-3.11	5.76		pCi/L						
Cobalt-57	U	0.872	+/-2.31	4.07		pCi/L						
Cobalt-58	U	0.607	+/-3.34	6.17		pCi/L						
Cobalt-60	U	-1.46	+/-3.60	6.39		pCi/L						
Europium-152	U	-2.12	+/-9.38	16.4		pCi/L						
Europium-154	U	-3.24	+/-9.21	16.6		pCi/L						
Europium-155	U	0.359	+/-9.45	16.4		pCi/L						
Iridium-192	U	0.523	+/-3.30	5.92		pCi/L						
Iron-59	U	-1.98	+/-6.55	12.0		pCi/L						
Lead-210	U	9.39	+/-239	383		pCi/L						
Lead-212	U	6.81	+/-10.9	11.2		pCi/L						
Lead-214	UI	0.00	+/-11.0	17.0		pCi/L						
Manganese-54	U	0.449	+/-3.20	5.86		pCi/L						
Mercury-203	U	-0.721	+/-3.51	6.20		pCi/L						
Neodymium-147	U	-4.45	+/-45.0	67.9		pCi/L						
Neptunium-239	U	7.39	+/-24.1	42.3		pCi/L						
Niobium-94	U	1.43	+/-3.08	5.79		pCi/L						
Niobium-95	U	-0.165	+/-3.17	5.76		pCi/L						
Potassium-40	U	25.6	+/-51.1	61.4		pCi/L						
Promethium-144	U	-0.926	+/-3.20	5.68		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	346376007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.85	+/-4.11	6.84	pCi/L
Radium-228	U	-19.3	+/-16.8	24.6	pCi/L
Ruthenium-106	U	0.363	+/-28.5	52.2	pCi/L
Silver-110m	U	3.51	+/-3.56	5.56	pCi/L
Sodium-22	U	-1.84	+/-3.32	5.83	pCi/L
Thallium-208	U	-2.53	+/-4.13	6.54	pCi/L
Thorium-230	U	-243	+/-825	1370	pCi/L
Thorium-234	U	72.1	+/-143	209	pCi/L
Tin-113	U	3.44	+/-4.39	8.10	pCi/L
Uranium-235	U	3.24	+/-23.2	32.7	pCi/L
Uranium-238	U	72.1	+/-143	209	pCi/L
Yttrium-88	U	1.78	+/-3.29	7.04	pCi/L
Zinc-65	U	-0.355	+/-7.15	13.3	pCi/L
Zirconium-95	U	-1.56	+/-6.04	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.14	+/-0.832	1.06	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	191	+/-3.92	1.42	5.00	pCi/L					
Alpha	U 0.945	+/-1.65	2.96	5.00	pCi/L	DXG3	05/06/14	1207	1382543	3
Beta	167	+/-7.90	4.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	379	+/-131	201	300	pCi/L	MYM1	04/21/14	1029	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	346376007	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	346376008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 14:18		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.17	+/-13.8	25.4		pCi/L		MJH1	04/15/14	1413 1379234	1
Americium-241	U	-9.03	+/-20.1	34.0		pCi/L					
Antimony-124	U	1.77	+/-7.40	15.2		pCi/L					
Antimony-125	U	7.88	+/-9.00	17.4		pCi/L					
Barium-133	U	-1.42	+/-4.65	6.88		pCi/L					
Barium-140	U	-4.29	+/-7.98	11.7		pCi/L					
Beryllium-7	U	4.24	+/-29.6	54.7		pCi/L					
Bismuth-212	U	-30.7	+/-56.2	75.4		pCi/L					
Bismuth-214		12.9	+/-10.9	12.6		pCi/L					
Cerium-139	U	0.819	+/-2.95	5.34		pCi/L					
Cerium-141	U	-6.6	+/-7.99	10.8		pCi/L					
Cerium-144	U	10.4	+/-19.9	36.7		pCi/L					
Cesium-134	U	0.705	+/-3.51	5.97		pCi/L					
Cesium-136	U	-0.545	+/-7.51	13.9		pCi/L					
Cesium-137	U	0.899	+/-6.13	5.80	10.0	pCi/L					
Chromium-51	U	8.24	+/-34.9	61.9		pCi/L					
Cobalt-56	U	-0.381	+/-3.67	6.50		pCi/L					
Cobalt-57	U	0.478	+/-2.54	4.34		pCi/L					
Cobalt-58	U	1.64	+/-3.72	6.94		pCi/L					
Cobalt-60	U	-0.105	+/-3.49	6.50		pCi/L					
Europium-152	U	0.634	+/-9.61	16.4		pCi/L					
Europium-154	U	5.89	+/-9.51	19.3		pCi/L					
Europium-155	U	-0.672	+/-10.6	17.9		pCi/L					
Iridium-192	U	-3.29	+/-3.52	5.76		pCi/L					
Iron-59	U	-1.28	+/-7.12	13.0		pCi/L					
Lead-210	U	70.5	+/-784	1190		pCi/L					
Lead-212	U	1.81	+/-10.7	12.1		pCi/L					
Lead-214	UI	0.00	+/-15.4	16.9		pCi/L					
Manganese-54	U	-2.63	+/-3.78	5.76		pCi/L					
Mercury-203	U	4.13	+/-3.93	6.62		pCi/L					
Neodymium-147	U	9.27	+/-41.9	77.7		pCi/L					
Neptunium-239	U	5.66	+/-27.6	47.3		pCi/L					
Niobium-94	U	-0.924	+/-3.38	5.92		pCi/L					
Niobium-95	U	-1.03	+/-3.52	6.16		pCi/L					
Potassium-40	U	5.52	+/-52.0	69.6		pCi/L					
Promethium-144	U	3.02	+/-3.66	6.95		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16 Project: WNUC00127  
Sample ID: 346376008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.200	+/-4.10	7.54	pCi/L
Radium-228	U	-2.17	+/-13.8	25.4	pCi/L
Ruthenium-106	U	-20	+/-31.2	53.3	pCi/L
Silver-110m	U	2.77	+/-3.64	6.26	pCi/L
Sodium-22	U	1.73	+/-3.38	6.74	pCi/L
Thallium-208	U	-2.48	+/-3.90	6.21	pCi/L
Thorium-230	U	947	+/-1360	2420	pCi/L
Thorium-234	U	-164	+/-209	331	pCi/L
Tin-113	U	-2.84	+/-4.51	7.47	pCi/L
Uranium-235	U	3.71	+/-29.8	36.0	pCi/L
Uranium-238	U	-164	+/-209	331	pCi/L
Yttrium-88	U	1.03	+/-3.79	7.69	pCi/L
Zinc-65	U	-5.64	+/-7.89	11.1	pCi/L
Zirconium-95	U	4.25	+/-6.78	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.25	+/-0.972	1.39	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	18.3	+/-1.52	1.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	30.7	+/-115	198	300	pCi/L	MYM1	04/21/14	1046	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	346376009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 11:30		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.24	+/-15.1	27.4		pCi/L		MJH1	04/15/14	1413 1379234	1
Americium-241	U	6.38	+/-18.8	29.8		pCi/L					
Antimony-124	U	0.355	+/-7.62	14.9		pCi/L					
Antimony-125	U	8.35	+/-9.19	17.3		pCi/L					
Barium-133	U	-1.98	+/-4.74	7.15		pCi/L					
Barium-140	U	5.34	+/-5.32	10.6		pCi/L					
Beryllium-7	U	17.2	+/-29.0	53.5		pCi/L					
Bismuth-212	U	-29.8	+/-54.1	78.6		pCi/L					
Bismuth-214		41.7	+/-13.5	11.3		pCi/L					
Cerium-139	U	-0.919	+/-3.09	5.11		pCi/L					
Cerium-141	U	0.980	+/-6.57	9.94		pCi/L					
Cerium-144	U	-6.87	+/-24.1	35.6		pCi/L					
Cesium-134	U	2.06	+/-3.43	6.70		pCi/L					
Cesium-136	U	2.74	+/-5.44	10.7		pCi/L					
Cesium-137	U	1.73	+/-5.03	6.16	10.0	pCi/L					
Chromium-51	U	-30.2	+/-35.0	55.4		pCi/L					
Cobalt-56	U	2.93	+/-2.97	5.61		pCi/L					
Cobalt-57	U	-0.968	+/-2.64	4.41		pCi/L					
Cobalt-58	U	-3.02	+/-3.48	4.94		pCi/L					
Cobalt-60	U	-5.86	+/-3.87	5.80		pCi/L					
Europium-152	U	7.65	+/-9.42	17.6		pCi/L					
Europium-154	U	-4.11	+/-11.0	19.3		pCi/L					
Europium-155	U	-3.85	+/-11.1	18.7		pCi/L					
Iridium-192	U	2.33	+/-3.56	6.54		pCi/L					
Iron-59	U	-1.96	+/-7.15	11.0		pCi/L					
Lead-210	U	9.16	+/-625	769		pCi/L					
Lead-212	U	8.03	+/-8.88	9.83		pCi/L					
Lead-214		72.5	+/-15.0	12.1		pCi/L					
Manganese-54	U	-1.15	+/-3.06	5.48		pCi/L					
Mercury-203	U	1.45	+/-3.54	6.45		pCi/L					
Neodymium-147	U	15.7	+/-32.2	59.3		pCi/L					
Neptunium-239	U	11.7	+/-28.8	49.9		pCi/L					
Niobium-94	U	4.11	+/-5.32	5.40		pCi/L					
Niobium-95	U	0.206	+/-3.32	6.17		pCi/L					
Potassium-40	U	33.1	+/-53.3	60.0		pCi/L					
Promethium-144	U	3.75	+/-3.62	6.14		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17

Sample ID: 346376009

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.119	+/-4.26	7.53	pCi/L
Radium-228	U	6.24	+/-15.1	27.4	pCi/L
Ruthenium-106	U	-8.43	+/-29.3	50.4	pCi/L
Silver-110m	U	-0.355	+/-3.44	5.23	pCi/L
Sodium-22	U	-1.35	+/-3.88	6.81	pCi/L
Thallium-208	U	2.37	+/-4.57	7.16	pCi/L
Thorium-230	U	203	+/-1340	2090	pCi/L
Thorium-234	U	163	+/-241	254	pCi/L
Tin-113	U	-1.52	+/-4.26	7.40	pCi/L
Uranium-235	U	-1.37	+/-27.4	39.2	pCi/L
Uranium-238	U	163	+/-241	254	pCi/L
Yttrium-88	U	-1.42	+/-3.84	5.91	pCi/L
Zinc-65	U	7.45	+/-7.30	11.0	pCi/L
Zirconium-95	U	-0.696	+/-5.81	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.296	+/-0.798	1.38	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		486	+/-6.21	1.94	5.00	pCi/L					
Alpha	U	1.19	+/-2.38	4.24	5.00	pCi/L	DXG3	05/06/14	1207	1382543	3
Beta		455	+/-12.7	4.07	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	858	+/-148	200	300	pCi/L	MYM1	04/21/14	1102	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 17  
Sample ID: 346376009

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 346376010  
Matrix: Ground Water  
Collect Date: 03-APR-14 10:27  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		7.65	+/-1.05	0.263	1.00	pCi/L		HAKB	05/12/14	1650	1386260	1
Uranium-235/236		0.277	+/-0.244	0.138	1.00	pCi/L						
Uranium-238		3.30	+/-0.696	0.219	1.00	pCi/L						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	5.05	+/-20.8	27.1		pCi/L		MJH1	04/15/14	1413	1379234	2
Americium-241	U	-4.08	+/-15.2	22.8		pCi/L						
Antimony-124	U	8.48	+/-8.75	18.9		pCi/L						
Antimony-125	U	-0.527	+/-9.00	15.7		pCi/L						
Barium-133	U	-1.64	+/-4.29	6.34		pCi/L						
Barium-140	U	2.71	+/-7.55	15.0		pCi/L						
Beryllium-7	U	-19.1	+/-29.9	49.2		pCi/L						
Bismuth-212	U	-22.5	+/-40.6	70.5		pCi/L						
Bismuth-214	U	3.11	+/-11.2	12.4		pCi/L						
Cerium-139	U	-1.12	+/-2.74	4.80		pCi/L						
Cerium-141	U	0.656	+/-5.60	10.1		pCi/L						
Cerium-144	U	-5.48	+/-19.0	33.7		pCi/L						
Cesium-134	U	-0.521	+/-3.00	5.45		pCi/L						
Cesium-136	U	0.838	+/-8.13	14.9		pCi/L						
Cesium-137	U	2.51	+/-6.52	5.74	10.0	pCi/L						
Chromium-51	U	0.821	+/-34.5	60.7		pCi/L						
Cobalt-56	U	-3.01	+/-3.58	5.94		pCi/L						
Cobalt-57	U	-1.76	+/-2.29	3.98		pCi/L						
Cobalt-58	U	-1.85	+/-3.24	5.58		pCi/L						
Cobalt-60	U	-0.548	+/-4.72	7.19		pCi/L						
Europium-152	U	12.3	+/-10.7	17.1		pCi/L						
Europium-154	U	-1.4	+/-9.40	17.6		pCi/L						
Europium-155	U	4.54	+/-10.0	17.3		pCi/L						
Iridium-192	U	-3.02	+/-3.40	5.63		pCi/L						
Iron-59	U	-2.46	+/-7.56	13.1		pCi/L						
Lead-210	U	-251	+/-338	505		pCi/L						
Lead-212	U	4.73	+/-7.99	11.0		pCi/L						
Lead-214	U	2.92	+/-10.1	14.3		pCi/L						
Manganese-54	U	-0.379	+/-2.97	5.37		pCi/L						
Mercury-203	U	-1.47	+/-4.21	6.31		pCi/L						
Neodymium-147	U	13.4	+/-39.8	75.8		pCi/L						

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 346376010

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	15.7	+/-26.0	45.2	pCi/L
Niobium-94	U	0.993	+/-3.06	5.74	pCi/L
Niobium-95	U	1.08	+/-3.33	6.29	pCi/L
Potassium-40	UI	0.00	+/-55.8	52.9	pCi/L
Promethium-144	U	-0.778	+/-3.03	5.41	pCi/L
Promethium-146	U	-1.48	+/-3.95	6.68	pCi/L
Radium-228	U	5.05	+/-20.8	27.1	pCi/L
Ruthenium-106	U	-2.16	+/-26.4	48.4	pCi/L
Silver-110m	U	0.0682	+/-3.52	5.62	pCi/L
Sodium-22	U	-0.543	+/-3.31	6.18	pCi/L
Thallium-208	U	-0.36	+/-4.23	7.21	pCi/L
Thorium-230	U	165	+/-1520	1630	pCi/L
Thorium-234	U	16.0	+/-176	188	pCi/L
Tin-113	U	0.0598	+/-4.28	7.50	pCi/L
Uranium-235	U	-3.69	+/-22.0	34.7	pCi/L
Uranium-238	U	16.0	+/-176	188	pCi/L
Yttrium-88	U	1.25	+/-3.49	6.54	pCi/L
Zinc-65	U	8.10	+/-5.58	11.9	pCi/L
Zirconium-95	U	-0.584	+/-6.54	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	23.5	+/-5.78	5.92	5.00	pCi/L	DXG3	05/05/14	1746	1382543	3
Beta	175	+/-6.78	3.51	5.00	pCi/L					
Alpha	17.9	+/-6.28	7.19	5.00	pCi/L	DXG3	05/06/14	1201	1382543	4
Beta	169	+/-6.56	4.17	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	299	+/-129	203	300	pCi/L	MYM1	04/21/14	1119	1379900	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	346376010	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			95.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	346376011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 10:05		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.3	+/-22.5	35.9		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-7.13	+/-14.3	21.8		pCi/L					
Antimony-124	U	-2.53	+/-8.57	16.4		pCi/L					
Antimony-125	U	3.76	+/-10.5	18.9		pCi/L					
Barium-133	U	-3.02	+/-5.45	7.92		pCi/L					
Barium-140	U	0.758	+/-6.74	13.6		pCi/L					
Beryllium-7	U	-1.36	+/-33.3	61.2		pCi/L					
Bismuth-212	U	23.5	+/-49.0	95.2		pCi/L					
Bismuth-214	UI	0.00	+/-16.3	22.2		pCi/L					
Cerium-139	U	1.46	+/-2.92	5.39		pCi/L					
Cerium-141	U	4.88	+/-5.17	9.24		pCi/L					
Cerium-144	U	-0.789	+/-20.6	34.9		pCi/L					
Cesium-134	U	-1.0	+/-4.72	8.37		pCi/L					
Cesium-136	U	-4.95	+/-6.99	12.1		pCi/L					
Cesium-137	U	0.907	+/-6.91	8.31	10.0	pCi/L					
Chromium-51	U	-4.84	+/-43.7	62.7		pCi/L					
Cobalt-56	U	2.10	+/-4.12	7.93		pCi/L					
Cobalt-57	U	1.65	+/-2.63	4.62		pCi/L					
Cobalt-58	U	0.743	+/-4.01	7.47		pCi/L					
Cobalt-60	U	1.07	+/-4.31	8.48		pCi/L					
Europium-152	U	-0.22	+/-10.4	18.3		pCi/L					
Europium-154	U	-2.37	+/-10.8	20.1		pCi/L					
Europium-155	U	-0.955	+/-9.86	16.9		pCi/L					
Iridium-192	U	-1.55	+/-3.70	6.35		pCi/L					
Iron-59	U	7.95	+/-7.45	15.2		pCi/L					
Lead-210	U	62.1	+/-360	523		pCi/L					
Lead-212	U	2.38	+/-9.77	11.0		pCi/L					
Lead-214		22.4	+/-17.6	14.4		pCi/L					
Manganese-54	U	2.09	+/-4.00	7.67		pCi/L					
Mercury-203	U	-1.19	+/-4.21	6.40		pCi/L					
Neodymium-147	U	-23.5	+/-37.0	64.6		pCi/L					
Neptunium-239	U	28.2	+/-29.3	45.2		pCi/L					
Niobium-94	U	-1.42	+/-4.41	6.63		pCi/L					
Niobium-95	U	2.89	+/-3.97	7.80		pCi/L					
Potassium-40	U	-25.3	+/-62.7	104		pCi/L					
Promethium-144	U	1.35	+/-4.53	7.40		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20  
Sample ID: 346376011

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.80	+/-4.61	8.69	pCi/L
Radium-228	U	10.3	+/-22.5	35.9	pCi/L
Ruthenium-106	U	12.3	+/-34.3	65.0	pCi/L
Silver-110m	U	1.56	+/-4.09	7.52	pCi/L
Sodium-22	U	-0.905	+/-3.78	7.00	pCi/L
Thallium-208	U	3.03	+/-9.74	6.96	pCi/L
Thorium-230	U	-128	+/-994	1640	pCi/L
Thorium-234	U	26.0	+/-177	190	pCi/L
Tin-113	U	1.80	+/-4.14	7.64	pCi/L
Uranium-235	U	-27.8	+/-25.6	33.8	pCi/L
Uranium-238	U	26.0	+/-177	190	pCi/L
Yttrium-88	U	-0.996	+/-5.37	10.1	pCi/L
Zinc-65	U	-3.43	+/-9.71	17.4	pCi/L
Zirconium-95	U	1.91	+/-6.80	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.17	+/-0.756	0.860	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	1.34	+/-1.00	1.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	11.3	+/-115	200	300	pCi/L	MYM1	04/21/14	1135	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.4	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22  
Sample ID: 346376012  
Matrix: Ground Water  
Collect Date: 03-APR-14 10:07  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.98	+/-17.7	28.3		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-5.29	+/-10.2	10.1		pCi/L					
Antimony-124	U	-4.78	+/-10.4	18.5		pCi/L					
Antimony-125	U	-8.9	+/-10.6	17.9		pCi/L					
Barium-133	U	-0.105	+/-5.47	8.40		pCi/L					
Barium-140	U	-0.365	+/-8.72	16.5		pCi/L					
Beryllium-7	U	1.11	+/-42.1	64.4		pCi/L					
Bismuth-212	U	32.0	+/-58.0	107		pCi/L					
Bismuth-214	U	-1.31	+/-11.7	16.2		pCi/L					
Cerium-139	U	2.23	+/-2.27	5.09		pCi/L					
Cerium-141	U	9.72	+/-6.87	11.1		pCi/L					
Cerium-144	U	-2.16	+/-19.1	33.1		pCi/L					
Cesium-134	U	-1.74	+/-4.76	8.43		pCi/L					
Cesium-136	U	8.20	+/-10.0	19.0		pCi/L					
Cesium-137	U	2.57	+/-4.36	8.01	10.0	pCi/L					
Chromium-51	U	-6.88	+/-36.8	65.2		pCi/L					
Cobalt-56	U	0.302	+/-4.75	8.66		pCi/L					
Cobalt-57	U	0.721	+/-2.38	4.20		pCi/L					
Cobalt-58	U	-1.48	+/-3.82	6.80		pCi/L					
Cobalt-60	U	1.71	+/-4.35	8.17		pCi/L					
Europium-152	U	-0.189	+/-11.5	20.0		pCi/L					
Europium-154	U	-4.59	+/-11.8	20.7		pCi/L					
Europium-155	U	-5.93	+/-8.83	15.1		pCi/L					
Iridium-192	U	-1.54	+/-4.28	6.44		pCi/L					
Iron-59	U	-0.105	+/-8.23	15.1		pCi/L					
Lead-210	U	75.8	+/-107	97.2		pCi/L					
Lead-212	U	1.08	+/-11.8	12.7		pCi/L					
Lead-214	UI	0.00	+/-14.3	15.3		pCi/L					
Manganese-54	U	5.68	+/-4.36	8.62		pCi/L					
Mercury-203	U	-1.25	+/-3.91	6.59		pCi/L					
Neodymium-147	U	51.8	+/-53.5	101		pCi/L					
Neptunium-239	U	-24.7	+/-24.8	41.6		pCi/L					
Niobium-94	U	-0.257	+/-3.98	6.95		pCi/L					
Niobium-95	U	-0.653	+/-4.85	8.40		pCi/L					
Potassium-40	U	87.5	+/-55.2	98.0		pCi/L					
Promethium-144	U	-0.899	+/-4.08	7.05		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22 Project: WNUC00127  
Sample ID: 346376012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.81	+/-4.91	8.53	pCi/L
Radium-228	U	2.98	+/-17.7	28.3	pCi/L
Ruthenium-106	U	-7.31	+/-37.3	64.9	pCi/L
Silver-110m	U	0.0375	+/-4.12	7.26	pCi/L
Sodium-22	U	-1.62	+/-4.17	7.30	pCi/L
Thallium-208	U	1.58	+/-5.79	7.09	pCi/L
Thorium-230	U	53.6	+/-633	975	pCi/L
Thorium-234	U	98.8	+/-134	148	pCi/L
Tin-113	U	-3.14	+/-4.78	8.21	pCi/L
Uranium-235	U	5.69	+/-29.2	34.1	pCi/L
Uranium-238	U	98.8	+/-134	148	pCi/L
Yttrium-88	U	1.10	+/-4.35	8.68	pCi/L
Zinc-65	U	5.03	+/-9.02	17.2	pCi/L
Zirconium-95	U	2.44	+/-8.31	14.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.67	+/-1.67	1.52	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	46.1	+/-2.42	2.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-20.1	+/-115	204	300	pCi/L	MYM1	04/21/14	1152	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 346376013  
Matrix: Ground Water  
Collect Date: 04-APR-14 13:35  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.130	+/-16.5	18.2		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-10.6	+/-17.6	27.5		pCi/L					
Antimony-124	U	0.464	+/-6.57	12.1		pCi/L					
Antimony-125	U	0.712	+/-6.02	10.4		pCi/L					
Barium-133	U	2.84	+/-3.07	4.97		pCi/L					
Barium-140	U	0.442	+/-4.54	7.46		pCi/L					
Beryllium-7	U	-8.04	+/-20.0	33.5		pCi/L					
Bismuth-212	U	-3.46	+/-32.8	57.3		pCi/L					
Bismuth-214		17.1	+/-6.37	7.89		pCi/L					
Cerium-139	U	-2.08	+/-1.86	3.01		pCi/L					
Cerium-141	U	-0.571	+/-3.68	6.22		pCi/L					
Cerium-144	U	-3.06	+/-12.3	20.9		pCi/L					
Cesium-134	U	-3.49	+/-2.78	3.62		pCi/L					
Cesium-136	U	2.58	+/-5.47	10.2		pCi/L					
Cesium-137	U	1.14	+/-2.53	4.07	10.0	pCi/L					
Chromium-51	U	9.57	+/-26.2	41.1		pCi/L					
Cobalt-56	U	0.886	+/-2.87	4.46		pCi/L					
Cobalt-57	U	0.774	+/-1.57	2.76		pCi/L					
Cobalt-58	U	-1.84	+/-2.60	3.63		pCi/L					
Cobalt-60	U	4.25	+/-6.41	4.86		pCi/L					
Europium-152	U	3.27	+/-6.56	11.7		pCi/L					
Europium-154	U	5.92	+/-6.50	12.8		pCi/L					
Europium-155	U	9.15	+/-6.53	11.9		pCi/L					
Iridium-192	U	-0.351	+/-2.66	4.04		pCi/L					
Iron-59	U	4.80	+/-5.25	9.10		pCi/L					
Lead-210	U	-989	+/-1160	1270		pCi/L					
Lead-212	U	4.27	+/-6.66	6.26		pCi/L					
Lead-214	U	8.37	+/-9.31	8.73		pCi/L					
Manganese-54	U	1.36	+/-2.30	4.18		pCi/L					
Mercury-203	U	0.458	+/-2.30	4.09		pCi/L					
Neodymium-147	U	21.6	+/-27.8	52.0		pCi/L					
Neptunium-239	U	-6.21	+/-16.3	27.7		pCi/L					
Niobium-94	U	-2.51	+/-2.24	3.67		pCi/L					
Niobium-95	U	0.642	+/-2.45	4.38		pCi/L					
Potassium-40	U	13.2	+/-51.2	41.0		pCi/L					
Promethium-144	U	0.308	+/-2.28	4.04		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 346376013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.67	+/-2.78	4.94	pCi/L
Radium-228	U	0.130	+/-16.5	18.2	pCi/L
Ruthenium-106	U	11.4	+/-20.4	37.4	pCi/L
Silver-110m	U	1.04	+/-2.28	3.68	pCi/L
Sodium-22	U	0.735	+/-2.42	4.47	pCi/L
Thallium-208	U	1.53	+/-4.31	3.96	pCi/L
Thorium-230	U	-896	+/-1490	1730	pCi/L
Thorium-234	U	86.2	+/-219	210	pCi/L
Tin-113	U	0.150	+/-2.86	4.96	pCi/L
Uranium-235	U	6.38	+/-18.3	22.7	pCi/L
Uranium-238	U	86.2	+/-219	210	pCi/L
Yttrium-88	U	-2.43	+/-2.67	4.36	pCi/L
Zinc-65	U	1.41	+/-5.38	8.63	pCi/L
Zirconium-95	U	-2.17	+/-3.99	6.77	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.33	+/-0.833	1.04	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	0.291	+/-0.852	1.42	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	139	+/-86.7	140	300	pCi/L	MYM1	04/29/14	0728	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	346376014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 08:49		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.32	+/-15.5	23.2		pCi/L		MJH1	04/16/14	1226 1379234	1
Americium-241	U	-1.1	+/-14.3	21.9		pCi/L					
Antimony-124	U	-6.75	+/-7.73	12.5		pCi/L					
Antimony-125	U	5.14	+/-8.41	15.5		pCi/L					
Barium-133	U	0.609	+/-4.21	6.61		pCi/L					
Barium-140	U	3.84	+/-6.46	13.6		pCi/L					
Beryllium-7	U	9.89	+/-34.2	53.8		pCi/L					
Bismuth-212	U	32.9	+/-45.0	87.7		pCi/L					
Bismuth-214	U	3.60	+/-11.8	10.7		pCi/L					
Cerium-139	U	-0.591	+/-2.78	4.92		pCi/L					
Cerium-141	U	4.70	+/-5.26	9.85		pCi/L					
Cerium-144	U	-0.575	+/-18.2	31.7		pCi/L					
Cesium-134	U	-2.01	+/-3.67	6.32		pCi/L					
Cesium-136	U	-6.44	+/-8.21	13.5		pCi/L					
Cesium-137	U	-1.73	+/-4.08	6.63	10.0	pCi/L					
Chromium-51	U	7.59	+/-35.3	62.7		pCi/L					
Cobalt-56	U	3.82	+/-3.14	6.52		pCi/L					
Cobalt-57	U	-1.48	+/-2.33	4.09		pCi/L					
Cobalt-58	U	-2.39	+/-3.45	5.84		pCi/L					
Cobalt-60	U	-0.409	+/-4.19	6.97		pCi/L					
Europium-152	U	-7.94	+/-10.5	15.7		pCi/L					
Europium-154	U	-1.1	+/-8.63	16.3		pCi/L					
Europium-155	U	-4.92	+/-10.4	17.0		pCi/L					
Iridium-192	U	-1.14	+/-3.30	5.67		pCi/L					
Iron-59	U	-1.79	+/-7.37	13.0		pCi/L					
Lead-210	U	72.9	+/-319	503		pCi/L					
Lead-212	U	7.12	+/-8.74	11.7		pCi/L					
Lead-214	U	2.68	+/-12.5	15.1		pCi/L					
Manganese-54	U	0.536	+/-3.62	6.62		pCi/L					
Mercury-203	U	2.23	+/-3.57	6.53		pCi/L					
Neodymium-147	U	-32.1	+/-39.2	67.5		pCi/L					
Neptunium-239	U	-13.8	+/-25.2	44.3		pCi/L					
Niobium-94	U	-1.81	+/-3.16	5.47		pCi/L					
Niobium-95	U	0.968	+/-3.44	6.44		pCi/L					
Potassium-40	U	-2.84	+/-46.2	76.8		pCi/L					
Promethium-144	U	0.180	+/-3.13	5.73		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24 Project: WNUC00127  
Sample ID: 346376014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.94	+/-4.06	7.38	pCi/L
Radium-228	U	4.32	+/-15.5	23.2	pCi/L
Ruthenium-106	U	-7.04	+/-29.6	53.1	pCi/L
Silver-110m	U	-2.84	+/-3.07	5.14	pCi/L
Sodium-22	U	-0.388	+/-3.04	5.76	pCi/L
Thallium-208	U	5.11	+/-5.65	5.21	pCi/L
Thorium-230	U	-102	+/-965	1560	pCi/L
Thorium-234	U	42.4	+/-150	226	pCi/L
Tin-113	U	-0.289	+/-4.02	7.03	pCi/L
Uranium-235	UI	0.00	+/-31.1	30.4	pCi/L
Uranium-238	U	42.4	+/-150	226	pCi/L
Yttrium-88	U	0.114	+/-2.82	5.71	pCi/L
Zinc-65	U	-3.02	+/-6.99	12.0	pCi/L
Zirconium-95	U	-4.06	+/-6.33	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.184	+/-0.816	2.00	5.00	pCi/L	DXG3	05/06/14	0715	1382543	2
Beta	U	-1.95	+/-2.56	4.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	101	+/-84.1	139	300	pCi/L	MYM1	04/29/14	0744	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	346376015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 10:42		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.32	+/-16.4	22.2		pCi/L		MJH1	04/16/14	1238 1379234	1
Americium-241	U	-15	+/-12.5	19.9		pCi/L					
Antimony-124	U	-6.22	+/-7.82	12.9		pCi/L					
Antimony-125	U	-3.01	+/-8.10	13.8		pCi/L					
Barium-133	U	-2.26	+/-4.68	6.81		pCi/L					
Barium-140	U	-0.644	+/-5.56	10.7		pCi/L					
Beryllium-7	U	15.5	+/-25.3	49.4		pCi/L					
Bismuth-212	U	-0.704	+/-42.7	78.2		pCi/L					
Bismuth-214		18.4	+/-11.1	10.6		pCi/L					
Cerium-139	U	-0.864	+/-2.85	4.63		pCi/L					
Cerium-141	U	4.52	+/-5.63	9.41		pCi/L					
Cerium-144	U	-15.2	+/-18.0	26.7		pCi/L					
Cesium-134	U	0.501	+/-3.29	6.14		pCi/L					
Cesium-136	U	-3.29	+/-8.44	14.6		pCi/L					
Cesium-137	U	-1.05	+/-2.84	5.06	10.0	pCi/L					
Chromium-51	U	-22	+/-29.1	48.4		pCi/L					
Cobalt-56	U	2.77	+/-3.12	6.29		pCi/L					
Cobalt-57	U	0.731	+/-2.18	3.99		pCi/L					
Cobalt-58	U	0.172	+/-3.55	5.95		pCi/L					
Cobalt-60	U	-0.38	+/-3.33	6.26		pCi/L					
Europium-152	U	-2.99	+/-10.4	15.0		pCi/L					
Europium-154	U	-2.96	+/-8.55	15.7		pCi/L					
Europium-155	U	3.08	+/-8.89	16.4		pCi/L					
Iridium-192	U	-0.604	+/-2.98	5.18		pCi/L					
Iron-59	U	0.309	+/-6.19	11.5		pCi/L					
Lead-210	U	118	+/-344	388		pCi/L					
Lead-212	U	-2.74	+/-7.94	10.7		pCi/L					
Lead-214	U	8.75	+/-9.40	11.1		pCi/L					
Manganese-54	U	-0.999	+/-3.17	5.58		pCi/L					
Mercury-203	U	-1.51	+/-3.22	5.51		pCi/L					
Neodymium-147	U	4.96	+/-42.0	74.3		pCi/L					
Neptunium-239	U	-1.37	+/-23.6	42.4		pCi/L					
Niobium-94	U	0.741	+/-2.94	5.49		pCi/L					
Niobium-95	U	-3.05	+/-3.85	5.64		pCi/L					
Potassium-40	U	6.09	+/-46.2	60.2		pCi/L					
Promethium-144	U	1.87	+/-3.19	6.09		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 26 Project: WNUC00127  
Sample ID: 346376015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.536	+/-3.87	6.69	pCi/L
Radium-228	U	-7.32	+/-16.4	22.2	pCi/L
Ruthenium-106	U	7.83	+/-27.3	51.5	pCi/L
Silver-110m	U	-0.395	+/-2.36	4.35	pCi/L
Sodium-22	U	-0.582	+/-2.93	5.52	pCi/L
Thallium-208	U	-0.867	+/-3.82	6.17	pCi/L
Thorium-230	U	-1170	+/-972	1450	pCi/L
Thorium-234	U	2.42	+/-144	226	pCi/L
Tin-113	U	1.46	+/-3.88	7.04	pCi/L
Uranium-235	U	14.1	+/-21.7	28.2	pCi/L
Uranium-238	U	2.42	+/-144	226	pCi/L
Yttrium-88	U	0.823	+/-2.80	5.97	pCi/L
Zinc-65	U	-0.0565	+/-7.74	13.9	pCi/L
Zirconium-95	U	-2.39	+/-5.96	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.74	+/-2.28	3.82	5.00	pCi/L	DXG3	05/06/14	0716	1382543	2
Beta		4.63	+/-2.47	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-2.17	+/-78.8	139	300	pCi/L	MYM1	04/29/14	0800	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	346376016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 09:42		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.58	+/-22.1	26.4		pCi/L		MJH1	04/16/14	1434 1379234	1
Americium-241	U	-0.838	+/-31.6	44.6		pCi/L					
Antimony-124	U	-5.31	+/-9.29	16.4		pCi/L					
Antimony-125	U	9.86	+/-10.2	19.3		pCi/L					
Barium-133	U	3.53	+/-5.14	8.48		pCi/L					
Barium-140	U	-1.24	+/-6.46	12.3		pCi/L					
Beryllium-7	U	48.1	+/-88.7	64.8		pCi/L					
Bismuth-212	U	-61.4	+/-70.7	94.3		pCi/L					
Bismuth-214		21.8	+/-14.1	14.0		pCi/L					
Cerium-139	U	0.308	+/-3.44	6.16		pCi/L					
Cerium-141	U	-3.45	+/-7.69	12.3		pCi/L					
Cerium-144	U	-14.1	+/-23.3	40.7		pCi/L					
Cesium-134	U	2.83	+/-6.70	8.49		pCi/L					
Cesium-136	U	1.03	+/-7.27	13.9		pCi/L					
Cesium-137	U	0.0855	+/-4.01	7.29	10.0	pCi/L					
Chromium-51	U	23.7	+/-41.0	74.0		pCi/L					
Cobalt-56	U	0.882	+/-3.87	7.46		pCi/L					
Cobalt-57	U	-0.778	+/-2.95	5.27		pCi/L					
Cobalt-58	U	-0.0562	+/-4.52	8.04		pCi/L					
Cobalt-60	U	1.64	+/-4.19	8.30		pCi/L					
Europium-152	U	1.88	+/-12.1	21.3		pCi/L					
Europium-154	U	0.968	+/-11.8	22.4		pCi/L					
Europium-155	U	10.5	+/-13.0	23.0		pCi/L					
Iridium-192	U	-1.65	+/-4.17	7.07		pCi/L					
Iron-59	U	10.3	+/-6.93	15.1		pCi/L					
Lead-210	U	596	+/-1290	1480		pCi/L					
Lead-212	U	1.47	+/-12.5	16.8		pCi/L					
Lead-214	UI	0.00	+/-14.2	21.1		pCi/L					
Manganese-54	U	-2.04	+/-3.60	6.38		pCi/L					
Mercury-203	U	-0.844	+/-4.25	7.35		pCi/L					
Neodymium-147	U	-24	+/-45.0	73.1		pCi/L					
Neptunium-239	U	27.6	+/-32.4	60.9		pCi/L					
Niobium-94	U	-2.17	+/-4.41	6.57		pCi/L					
Niobium-95	U	1.28	+/-4.08	7.59		pCi/L					
Potassium-40	U	39.7	+/-52.5	73.0		pCi/L					
Promethium-144	U	2.39	+/-3.82	7.28		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27 Project: WNUC00127  
Sample ID: 346376016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.12	+/-4.55	8.81	pCi/L
Radium-228	U	2.58	+/-22.1	26.4	pCi/L
Ruthenium-106	U	12.1	+/-38.2	62.9	pCi/L
Silver-110m	U	-0.401	+/-3.86	6.90	pCi/L
Sodium-22	U	0.206	+/-4.13	7.81	pCi/L
Thallium-208	U	-2.23	+/-5.42	8.08	pCi/L
Thorium-230	U	-428	+/-1870	2820	pCi/L
Thorium-234	U	77.9	+/-313	367	pCi/L
Tin-113	U	0.307	+/-4.47	8.29	pCi/L
Uranium-235	U	0.377	+/-29.4	47.4	pCi/L
Uranium-238	U	77.9	+/-313	367	pCi/L
Yttrium-88	U	-1.28	+/-4.29	7.96	pCi/L
Zinc-65	U	0.619	+/-8.91	16.7	pCi/L
Zirconium-95	U	11.4	+/-6.92	14.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	4.77	+/-3.47	4.62	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	10.4	+/-3.28	3.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-48.4	+/-91.5	164	300	pCi/L	MYM1	04/30/14	2213	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.8	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	346376017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 11:00		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.45	+/-19.0	20.0		pCi/L		MJH1	04/16/14	1434 1379234	1
Americium-241	U	-0.813	+/-20.5	35.5		pCi/L					
Antimony-124	U	-0.37	+/-9.49	18.1		pCi/L					
Antimony-125	U	0.669	+/-9.25	15.0		pCi/L					
Barium-133	U	3.32	+/-4.72	7.71		pCi/L					
Barium-140	U	-1.48	+/-8.25	15.5		pCi/L					
Beryllium-7	U	-14.5	+/-31.0	54.8		pCi/L					
Bismuth-212	U	-41.3	+/-62.6	87.5		pCi/L					
Bismuth-214	U	3.79	+/-10.0	14.1		pCi/L					
Cerium-139	U	-1.06	+/-2.81	4.95		pCi/L					
Cerium-141	U	-9.73	+/-7.58	10.7		pCi/L					
Cerium-144	U	1.91	+/-19.1	34.7		pCi/L					
Cesium-134	U	-0.575	+/-3.48	6.18		pCi/L					
Cesium-136	U	-0.145	+/-8.59	16.0		pCi/L					
Cesium-137	U	1.60	+/-4.65	7.71	10.0	pCi/L					
Chromium-51	U	40.4	+/-36.4	64.7		pCi/L					
Cobalt-56	U	0.195	+/-3.89	6.98		pCi/L					
Cobalt-57	U	-0.978	+/-3.09	4.52		pCi/L					
Cobalt-58	U	-1.32	+/-3.03	5.24		pCi/L					
Cobalt-60	U	-1.78	+/-3.06	5.28		pCi/L					
Europium-152	U	-2.61	+/-9.90	17.0		pCi/L					
Europium-154	U	3.00	+/-9.74	18.9		pCi/L					
Europium-155	U	-4.08	+/-11.2	18.5		pCi/L					
Iridium-192	U	-2.57	+/-3.48	5.79		pCi/L					
Iron-59	U	0.115	+/-7.54	14.1		pCi/L					
Lead-210	U	95.0	+/-1010	932		pCi/L					
Lead-212	U	3.29	+/-8.41	12.5		pCi/L					
Lead-214	U	2.68	+/-10.2	13.8		pCi/L					
Manganese-54	U	-1.62	+/-3.70	5.81		pCi/L					
Mercury-203	U	-0.357	+/-3.68	6.44		pCi/L					
Neodymium-147	U	-16.7	+/-51.6	86.1		pCi/L					
Neptunium-239	U	15.4	+/-32.1	49.9		pCi/L					
Niobium-94	U	2.94	+/-4.81	5.35		pCi/L					
Niobium-95	U	0.000837	+/-4.33	6.71		pCi/L					
Potassium-40	U	9.74	+/-61.6	62.5		pCi/L					
Promethium-144	U	-2.22	+/-4.04	5.83		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	346376017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-3.97	7.47	pCi/L
Radium-228	U	4.45	+/-19.0	20.0	pCi/L
Ruthenium-106	U	-22.7	+/-27.5	46.1	pCi/L
Silver-110m	U	-3.12	+/-3.50	5.81	pCi/L
Sodium-22	U	0.994	+/-3.43	6.65	pCi/L
Thallium-208	UI	0.00	+/-5.54	4.73	pCi/L
Thorium-230	U	86.5	+/-1290	2230	pCi/L
Thorium-234	U	-134	+/-200	318	pCi/L
Tin-113	U	-3.35	+/-4.33	7.08	pCi/L
Uranium-235	U	-36.7	+/-26.5	35.4	pCi/L
Uranium-238	U	-134	+/-200	318	pCi/L
Yttrium-88	U	-0.355	+/-4.35	8.24	pCi/L
Zinc-65	U	0.402	+/-7.37	13.8	pCi/L
Zirconium-95	U	-5.22	+/-6.27	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.37	+/-3.55	4.97	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		59.2	+/-4.29	2.97	5.00	pCi/L					
Alpha		9.25	+/-4.80	4.99	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta		63.3	+/-6.26	4.50	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	125	+/-85.5	139	300	pCi/L	MYM1	04/29/14	0833	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28  
Sample ID: 346376017

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	346376018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 09:30		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	20.2	+/-18.4	32.0		pCi/L		MJH1	04/22/14	1155	1379234	1
Americium-241	U	-6.79	+/-12.1	18.2		pCi/L						
Antimony-124	U	-7.42	+/-10.6	17.9		pCi/L						
Antimony-125	U	-4.4	+/-9.88	17.4		pCi/L						
Barium-133	U	3.04	+/-4.38	8.27		pCi/L						
Barium-140	U	-1.39	+/-12.4	23.0		pCi/L						
Beryllium-7	U	-18	+/-38.8	67.7		pCi/L						
Bismuth-212	U	19.3	+/-56.0	103		pCi/L						
Bismuth-214	U	7.56	+/-14.0	17.1		pCi/L						
Cerium-139	U	-0.898	+/-2.94	5.19		pCi/L						
Cerium-141	U	2.61	+/-6.29	11.6		pCi/L						
Cerium-144	U	2.91	+/-22.9	34.9		pCi/L						
Cesium-134	U	0.159	+/-4.32	8.02		pCi/L						
Cesium-136	U	-2.7	+/-13.2	23.6		pCi/L						
Cesium-137	U	-0.679	+/-4.86	7.32	10.0	pCi/L						
Chromium-51	U	-11.2	+/-45.1	77.1		pCi/L						
Cobalt-56	U	1.42	+/-4.50	8.51		pCi/L						
Cobalt-57	U	0.107	+/-2.65	4.49		pCi/L						
Cobalt-58	U	1.57	+/-4.36	8.33		pCi/L						
Cobalt-60	U	-6.51	+/-4.60	6.65		pCi/L						
Europium-152	U	-3.97	+/-10.4	17.6		pCi/L						
Europium-154	U	-12.5	+/-11.4	18.6		pCi/L						
Europium-155	U	-6.93	+/-10.4	17.1		pCi/L						
Iridium-192	U	-2.82	+/-3.79	6.26		pCi/L						
Iron-59	U	3.48	+/-9.37	17.9		pCi/L						
Lead-210	U	-195	+/-272	408		pCi/L						
Lead-212	U	0.266	+/-8.24	12.8		pCi/L						
Lead-214	U	3.28	+/-12.0	15.4		pCi/L						
Manganese-54	U	2.65	+/-3.49	6.97		pCi/L						
Mercury-203	U	4.74	+/-4.25	7.95		pCi/L						
Neodymium-147	U	89.0	+/-80.8	135		pCi/L						
Neptunium-239	U	17.6	+/-27.2	47.8		pCi/L						
Niobium-94	U	6.88	+/-5.02	7.12		pCi/L						
Niobium-95	U	-0.462	+/-5.08	8.02		pCi/L						
Potassium-40	U	-10.5	+/-59.7	101		pCi/L						
Promethium-144	U	0.411	+/-4.33	6.72		pCi/L						

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 29 Project: WNUC00127  
Sample ID: 346376018 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.06	+/-4.14	7.26	pCi/L
Radium-228	U	20.2	+/-18.4	32.0	pCi/L
Ruthenium-106	U	-26.2	+/-35.5	59.2	pCi/L
Silver-110m	U	2.86	+/-3.82	7.27	pCi/L
Sodium-22	U	-4.43	+/-4.03	6.57	pCi/L
Thallium-208	U	-3.48	+/-5.27	7.15	pCi/L
Thorium-230	U	-50.3	+/-1060	1550	pCi/L
Thorium-234	U	2.65	+/-196	215	pCi/L
Tin-113	U	-1.99	+/-5.14	8.65	pCi/L
Uranium-235	U	4.87	+/-23.2	34.9	pCi/L
Uranium-238	U	2.65	+/-196	215	pCi/L
Yttrium-88	U	0.0953	+/-4.09	8.20	pCi/L
Zinc-65	U	-7.0	+/-8.35	13.7	pCi/L
Zirconium-95	U	-3.7	+/-7.85	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.78	+/-3.25	4.80	5.00	pCi/L	DXG3	05/05/14	1304	1382544	2
Beta		11.4	+/-3.44	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-36.2	+/-90.9	162	300	pCi/L	MYM1	04/30/14	2230	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	346376019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 09:47		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		13.2	+/-1.50	0.408	1.00	pCi/L		HAKB	05/12/14	1650 1386260	1
Uranium-235/236		0.696	+/-0.417	0.378	1.00	pCi/L					
Uranium-238		4.14	+/-0.845	0.345	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.51	+/-18.5	27.4		pCi/L		MJH1	04/16/14	1435 1379234	2
Americium-241	U	22.0	+/-31.6	52.2		pCi/L					
Antimony-124	U	4.82	+/-10.3	21.1		pCi/L					
Antimony-125	U	4.55	+/-10.4	19.5		pCi/L					
Barium-133	U	-1.7	+/-4.75	8.44		pCi/L					
Barium-140	U	0.051	+/-8.96	17.1		pCi/L					
Beryllium-7	U	29.4	+/-42.6	64.7		pCi/L					
Bismuth-212	U	44.9	+/-48.3	96.7		pCi/L					
Bismuth-214	U	14.7	+/-12.1	17.2		pCi/L					
Cerium-139	U	-1.95	+/-3.25	5.46		pCi/L					
Cerium-141	U	5.47	+/-6.42	11.7		pCi/L					
Cerium-144	U	1.15	+/-21.8	38.3		pCi/L					
Cesium-134	U	3.50	+/-4.33	8.46		pCi/L					
Cesium-136	U	1.21	+/-9.56	18.3		pCi/L					
Cesium-137	U	1.08	+/-3.73	7.00	10.0	pCi/L					
Chromium-51	U	17.5	+/-38.7	72.4		pCi/L					
Cobalt-56	U	-1.77	+/-3.94	6.79		pCi/L					
Cobalt-57	U	-0.477	+/-2.97	5.15		pCi/L					
Cobalt-58	U	-0.502	+/-4.52	6.98		pCi/L					
Cobalt-60	U	1.66	+/-4.27	8.43		pCi/L					
Europium-152	U	-0.0748	+/-10.4	18.9		pCi/L					
Europium-154	U	-9.17	+/-11.3	19.1		pCi/L					
Europium-155	U	-0.441	+/-13.1	22.9		pCi/L					
Iridium-192	U	0.155	+/-3.62	6.62		pCi/L					
Iron-59	U	3.57	+/-6.98	14.3		pCi/L					
Lead-210	U	-996	+/-1330	1820		pCi/L					
Lead-212	U	-1.09	+/-9.28	13.5		pCi/L					
Lead-214	U	4.85	+/-9.82	16.2		pCi/L					
Manganese-54	U	0.119	+/-3.75	6.82		pCi/L					
Mercury-203	U	0.898	+/-4.13	7.22		pCi/L					
Neodymium-147	U	-4.56	+/-52.6	95.2		pCi/L					



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 346376019

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	10.0	+/-31.9	56.8	pCi/L
Niobium-94	U	1.27	+/-4.48	7.21	pCi/L
Niobium-95	U	-1.64	+/-3.92	6.80	pCi/L
Potassium-40	U	61.8	+/-41.3	91.7	pCi/L
Promethium-144	U	0.793	+/-3.61	6.67	pCi/L
Promethium-146	U	-2.47	+/-4.34	7.55	pCi/L
Radium-228	U	-7.51	+/-18.5	27.4	pCi/L
Ruthenium-106	U	3.18	+/-34.5	63.1	pCi/L
Silver-110m	U	-1.9	+/-3.75	6.47	pCi/L
Sodium-22	U	-3.23	+/-3.98	6.75	pCi/L
Thallium-208	UI	0.00	+/-6.61	6.33	pCi/L
Thorium-230	U	1820	+/-2110	3030	pCi/L
Thorium-234	U	170	+/-359	413	pCi/L
Tin-113	U	1.51	+/-4.75	8.84	pCi/L
Uranium-235	U	-17.4	+/-25.5	38.1	pCi/L
Uranium-238	U	170	+/-359	413	pCi/L
Yttrium-88	U	-0.177	+/-5.09	9.61	pCi/L
Zinc-65	U	-1.22	+/-7.59	14.2	pCi/L
Zirconium-95	U	1.61	+/-6.62	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	24.3	+/-6.33	4.54	5.00	pCi/L	DXG3	05/05/14	1304	1382544	3
Beta	33.2	+/-4.97	4.79	5.00	pCi/L					
Alpha	19.8	+/-6.49	4.55	5.00	pCi/L	DXG3	05/06/14	1124	1382544	4
Beta	32.4	+/-5.12	3.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	2.05	+/-94.4	165	300	pCi/L	MYM1	04/30/14	2246	1379901	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	346376019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			79.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	346376020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 14:50		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	3.53	+/-18.4	30.5		pCi/L		MJH1	04/16/14	1435	1379234	1
Americium-241	U	3.06	+/-20.6	31.7		pCi/L						
Antimony-124	U	0.344	+/-9.76	18.8		pCi/L						
Antimony-125	U	-0.609	+/-9.80	17.5		pCi/L						
Barium-133	U	-2.97	+/-5.07	7.44		pCi/L						
Barium-140	U	0.290	+/-8.06	15.6		pCi/L						
Beryllium-7	U	24.5	+/-35.4	66.7		pCi/L						
Bismuth-212	U	-22.2	+/-52.3	89.5		pCi/L						
Bismuth-214	U	10.2	+/-8.11	15.8		pCi/L						
Cerium-139	U	1.67	+/-3.72	6.45		pCi/L						
Cerium-141	U	2.92	+/-7.45	12.9		pCi/L						
Cerium-144	U	16.2	+/-23.3	41.2		pCi/L						
Cesium-134	U	-1.43	+/-3.87	6.67		pCi/L						
Cesium-136	U	3.85	+/-10.1	17.4		pCi/L						
Cesium-137	U	-1.83	+/-3.77	6.45	10.0	pCi/L						
Chromium-51	U	-30.2	+/-47.4	72.0		pCi/L						
Cobalt-56	U	0.182	+/-4.19	7.52		pCi/L						
Cobalt-57	U	0.288	+/-3.31	5.66		pCi/L						
Cobalt-58	U	-0.906	+/-4.13	7.22		pCi/L						
Cobalt-60	U	0.705	+/-3.96	7.65		pCi/L						
Europium-152	U	0.901	+/-11.5	19.6		pCi/L						
Europium-154	U	-1.7	+/-9.98	18.6		pCi/L						
Europium-155	U	-0.349	+/-12.9	22.1		pCi/L						
Iridium-192	U	0.466	+/-4.18	7.51		pCi/L						
Iron-59	U	-1.41	+/-7.56	14.0		pCi/L						
Lead-210	U	96.3	+/-721	913		pCi/L						
Lead-212	U	-2.45	+/-8.51	13.4		pCi/L						
Lead-214	UI	0.00	+/-15.0	17.2		pCi/L						
Manganese-54	U	1.38	+/-4.19	7.67		pCi/L						
Mercury-203	U	1.48	+/-4.35	7.91		pCi/L						
Neodymium-147	U	15.2	+/-53.3	97.9		pCi/L						
Neptunium-239	U	-10.7	+/-33.6	56.6		pCi/L						
Niobium-94	U	-2.31	+/-3.84	6.45		pCi/L						
Niobium-95	U	1.01	+/-4.48	8.12		pCi/L						
Potassium-40	U	21.1	+/-66.3	68.1		pCi/L						
Promethium-144	U	0.723	+/-3.88	7.00		pCi/L						

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32 Project: WNUC00127  
Sample ID: 346376020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.351	+/-4.69	8.35	pCi/L
Radium-228	U	3.53	+/-18.4	30.5	pCi/L
Ruthenium-106	U	-23.6	+/-37.2	60.6	pCi/L
Silver-110m	U	1.42	+/-3.54	6.61	pCi/L
Sodium-22	U	-1.53	+/-3.65	6.53	pCi/L
Thallium-208	U	-0.385	+/-4.75	7.88	pCi/L
Thorium-230	U	1870	+/-1640	2180	pCi/L
Thorium-234	UI	0.00	+/-199	271	pCi/L
Tin-113	U	0.997	+/-4.56	8.34	pCi/L
Uranium-235	U	11.3	+/-25.3	43.9	pCi/L
Uranium-238	UI	0.00	+/-199	271	pCi/L
Yttrium-88	U	5.91	+/-4.45	9.38	pCi/L
Zinc-65	U	-2.24	+/-7.81	14.2	pCi/L
Zirconium-95	U	-0.0312	+/-6.46	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	14.2	+/-6.57	4.92	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	268	+/-10.7	2.89	5.00	pCi/L					
Alpha	6.46	+/-3.86	4.94	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta	276	+/-11.0	3.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	455	+/-99.4	137	300	pCi/L	MYM1	04/29/14	0921	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 346376020

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	346376021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 08:28		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.45	+/-23.9	22.5		pCi/L		MJH1	04/14/14	0904 1379235	1
Americium-241	U	-12	+/-18.9	33.8		pCi/L					
Antimony-124	U	2.82	+/-6.62	14.5		pCi/L					
Antimony-125	U	-1.91	+/-10.2	15.9		pCi/L					
Barium-133	U	-2.0	+/-4.36	6.68		pCi/L					
Barium-140	U	2.81	+/-5.83	12.4		pCi/L					
Beryllium-7	U	-21.5	+/-29.4	49.7		pCi/L					
Bismuth-212	U	-40.4	+/-64.4	90.0		pCi/L					
Bismuth-214		15.9	+/-14.5	11.5		pCi/L					
Cerium-139	U	-2.33	+/-3.67	5.18		pCi/L					
Cerium-141	U	1.98	+/-7.50	9.49		pCi/L					
Cerium-144	U	10.2	+/-19.1	34.9		pCi/L					
Cesium-134	U	1.44	+/-3.55	6.92		pCi/L					
Cesium-136	U	2.78	+/-6.91	13.6		pCi/L					
Cesium-137	U	1.40	+/-3.43	6.38	10.0	pCi/L					
Chromium-51	U	12.8	+/-29.6	56.1		pCi/L					
Cobalt-56	U	2.22	+/-3.46	6.88		pCi/L					
Cobalt-57	U	-0.293	+/-2.50	4.43		pCi/L					
Cobalt-58	U	2.89	+/-3.48	7.03		pCi/L					
Cobalt-60	U	3.41	+/-4.26	6.75		pCi/L					
Europium-152	U	1.95	+/-11.2	18.0		pCi/L					
Europium-154	U	-4.87	+/-9.23	16.7		pCi/L					
Europium-155	U	11.5	+/-10.7	20.3		pCi/L					
Iridium-192	U	-0.24	+/-3.46	5.57		pCi/L					
Iron-59	U	4.41	+/-7.16	14.3		pCi/L					
Lead-210	U	560	+/-740	1310		pCi/L					
Lead-212	U	9.09	+/-7.58	9.41		pCi/L					
Lead-214	UI	0.00	+/-13.9	12.7		pCi/L					
Manganese-54	U	-0.505	+/-3.05	5.62		pCi/L					
Mercury-203	U	-1.05	+/-4.24	6.36		pCi/L					
Neodymium-147	U	1.44	+/-39.8	71.9		pCi/L					
Neptunium-239	U	0.739	+/-26.5	47.4		pCi/L					
Niobium-94	U	1.30	+/-2.99	5.82		pCi/L					
Niobium-95	U	2.28	+/-3.87	7.52		pCi/L					
Potassium-40	U	-11.9	+/-50.8	90.3		pCi/L					
Promethium-144	U	-0.515	+/-3.82	6.27		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 33 Project: WNUC00127  
Sample ID: 346376021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-4.09	6.83	pCi/L
Radium-228	U	1.45	+/-23.9	22.5	pCi/L
Ruthenium-106	U	-14	+/-30.1	51.0	pCi/L
Silver-110m	U	0.655	+/-3.00	5.51	pCi/L
Sodium-22	U	-3.1	+/-3.44	5.83	pCi/L
Thallium-208	U	0.474	+/-5.64	6.31	pCi/L
Thorium-230	U	1510	+/-2040	2090	pCi/L
Thorium-234	U	-35.7	+/-223	347	pCi/L
Tin-113	U	0.440	+/-4.49	7.28	pCi/L
Uranium-235	U	7.03	+/-26.6	37.8	pCi/L
Uranium-238	U	-35.7	+/-223	347	pCi/L
Yttrium-88	U	3.56	+/-4.11	9.03	pCi/L
Zinc-65	U	-3.75	+/-7.56	13.0	pCi/L
Zirconium-95	U	2.10	+/-5.72	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.80	+/-1.95	3.12	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		5.52	+/-3.22	4.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	119	+/-87.1	143	300	pCi/L	MYM1	04/29/14	0937	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	346376022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 09:06		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.3	+/-15.3	22.9		pCi/L		MJH1	04/14/14	0904 1379235	1
Americium-241	U	15.4	+/-10.6	18.5		pCi/L					
Antimony-124	U	6.24	+/-7.51	16.1		pCi/L					
Antimony-125	U	0.799	+/-8.82	15.6		pCi/L					
Barium-133	U	-2.6	+/-4.55	6.70		pCi/L					
Barium-140	U	1.34	+/-6.46	12.0		pCi/L					
Beryllium-7	U	10.9	+/-29.2	52.6		pCi/L					
Bismuth-212	U	38.4	+/-41.1	81.4		pCi/L					
Bismuth-214	U	1.27	+/-11.2	11.5		pCi/L					
Cerium-139	U	-0.0207	+/-3.31	4.55		pCi/L					
Cerium-141	U	0.656	+/-5.76	9.42		pCi/L					
Cerium-144	U	-7.51	+/-19.1	32.1		pCi/L					
Cesium-134	U	1.64	+/-3.69	6.94		pCi/L					
Cesium-136	U	-8.4	+/-10.1	13.0		pCi/L					
Cesium-137	U	2.20	+/-3.44	6.58	10.0	pCi/L					
Chromium-51	U	-6.87	+/-32.5	57.1		pCi/L					
Cobalt-56	U	1.72	+/-3.25	6.21		pCi/L					
Cobalt-57	U	-3.06	+/-2.29	3.68		pCi/L					
Cobalt-58	U	3.07	+/-3.13	5.64		pCi/L					
Cobalt-60	U	-1.82	+/-3.78	6.64		pCi/L					
Europium-152	U	-3.48	+/-9.12	15.8		pCi/L					
Europium-154	U	-11.8	+/-9.71	15.5		pCi/L					
Europium-155	U	-1.4	+/-9.36	16.1		pCi/L					
Iridium-192	U	0.629	+/-3.30	5.93		pCi/L					
Iron-59	U	-2.73	+/-6.25	11.3		pCi/L					
Lead-210	U	63.3	+/-319	282		pCi/L					
Lead-212	U	-0.0819	+/-6.79	11.2		pCi/L					
Lead-214	U	7.33	+/-11.9	14.8		pCi/L					
Manganese-54	U	4.79	+/-2.92	6.13		pCi/L					
Mercury-203	U	0.700	+/-3.26	5.91		pCi/L					
Neodymium-147	U	5.20	+/-41.1	72.6		pCi/L					
Neptunium-239	U	-0.507	+/-25.7	44.3		pCi/L					
Niobium-94	U	3.08	+/-3.17	5.93		pCi/L					
Niobium-95	U	0.824	+/-3.52	6.50		pCi/L					
Potassium-40	U	49.9	+/-68.9	66.8		pCi/L					
Promethium-144	U	2.39	+/-3.87	5.76		pCi/L					



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	346376022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.22	+/-4.06	6.69	pCi/L
Radium-228	U	-11.3	+/-15.3	22.9	pCi/L
Ruthenium-106	U	-3.4	+/-27.9	50.7	pCi/L
Silver-110m	U	-3.46	+/-3.02	4.99	pCi/L
Sodium-22	U	-4.08	+/-3.43	5.49	pCi/L
Thallium-208	U	-2.75	+/-4.38	7.00	pCi/L
Thorium-230	U	-164	+/-805	1340	pCi/L
Thorium-234	U	12.3	+/-151	159	pCi/L
Tin-113	U	1.32	+/-4.28	7.71	pCi/L
Uranium-235	U	-11.8	+/-23.6	31.7	pCi/L
Uranium-238	U	12.3	+/-151	159	pCi/L
Yttrium-88	U	0.726	+/-3.55	7.15	pCi/L
Zinc-65	U	4.19	+/-6.87	12.3	pCi/L
Zirconium-95	U	2.59	+/-5.97	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.664	+/-1.73	4.62	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		4.12	+/-2.70	4.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.9	+/-82.4	140	300	pCi/L	MYM1	04/29/14	0954	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	346376023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 11:53		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.297	+/-18.0	28.7		pCi/L		MJH1	04/14/14	0916 1379235	1
Americium-241	U	8.64	+/-15.5	26.0		pCi/L					
Antimony-124	U	11.1	+/-6.86	17.0		pCi/L					
Antimony-125	U	-8.03	+/-9.38	14.9		pCi/L					
Barium-133	U	-1.81	+/-4.71	7.14		pCi/L					
Barium-140	U	-3.05	+/-5.14	8.86		pCi/L					
Beryllium-7	U	4.13	+/-31.2	53.0		pCi/L					
Bismuth-212	U	19.6	+/-47.0	89.9		pCi/L					
Bismuth-214		40.9	+/-12.5	13.8		pCi/L					
Cerium-139	U	-1.57	+/-3.00	5.01		pCi/L					
Cerium-141	U	-0.741	+/-5.18	8.89		pCi/L					
Cerium-144	U	2.67	+/-21.8	34.1		pCi/L					
Cesium-134	U	3.78	+/-3.31	6.89		pCi/L					
Cesium-136	U	7.41	+/-5.94	11.2		pCi/L					
Cesium-137	U	2.28	+/-6.13	5.96	10.0	pCi/L					
Chromium-51	U	-0.813	+/-29.5	52.9		pCi/L					
Cobalt-56	U	-0.192	+/-3.47	6.34		pCi/L					
Cobalt-57	U	0.532	+/-2.54	4.47		pCi/L					
Cobalt-58	U	2.30	+/-3.38	6.05		pCi/L					
Cobalt-60	U	1.15	+/-3.71	7.31		pCi/L					
Europium-152	U	-7.15	+/-9.39	16.0		pCi/L					
Europium-154	U	9.19	+/-7.72	19.4		pCi/L					
Europium-155	U	3.14	+/-10.1	18.1		pCi/L					
Iridium-192	U	1.01	+/-3.23	5.93		pCi/L					
Iron-59	U	5.90	+/-6.75	13.6		pCi/L					
Lead-210	U	-25.1	+/-399	628		pCi/L					
Lead-212	U	0.488	+/-8.21	10.4		pCi/L					
Lead-214		48.8	+/-13.2	13.1		pCi/L					
Manganese-54	U	-0.861	+/-3.94	6.06		pCi/L					
Mercury-203	U	4.68	+/-7.61	5.78		pCi/L					
Neodymium-147	U	-18.7	+/-31.5	52.7		pCi/L					
Neptunium-239	U	6.04	+/-27.0	47.8		pCi/L					
Niobium-94	U	0.0226	+/-3.11	5.74		pCi/L					
Niobium-95	U	-1.75	+/-4.01	6.00		pCi/L					
Potassium-40	U	-26.6	+/-50.0	78.3		pCi/L					
Promethium-144	U	-0.522	+/-3.04	5.53		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 39 Project: WNUC00127  
Sample ID: 346376023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.68	+/-4.33	7.31	pCi/L
Radium-228	U	0.297	+/-18.0	28.7	pCi/L
Ruthenium-106	U	-28.7	+/-33.9	54.3	pCi/L
Silver-110m	U	4.59	+/-3.40	5.50	pCi/L
Sodium-22	U	3.23	+/-2.71	7.10	pCi/L
Thallium-208	U	3.41	+/-7.30	6.23	pCi/L
Thorium-230	U	-1270	+/-1260	1750	pCi/L
Thorium-234	UI	0.00	+/-200	207	pCi/L
Tin-113	U	-1.69	+/-4.11	7.13	pCi/L
Uranium-235	U	-8.76	+/-24.0	34.8	pCi/L
Uranium-238	UI	0.00	+/-200	207	pCi/L
Yttrium-88	U	-2.68	+/-3.84	6.37	pCi/L
Zinc-65	U	3.65	+/-8.96	14.9	pCi/L
Zirconium-95	U	5.33	+/-8.46	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.921	+/-2.55	4.75	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		18.7	+/-3.40	3.29	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	118	+/-86.4	142	300	pCi/L	MYM1	04/29/14	1010	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 41R	Project:	WNUC00127
Sample ID:	346376024	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 10:15		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.15	+/-13.4	23.4		pCi/L		MJH1	04/14/14	0917 1379235	1
Americium-241	U	7.27	+/-23.0	36.5		pCi/L					
Antimony-124	U	8.73	+/-9.26	19.8		pCi/L					
Antimony-125	U	1.83	+/-9.06	16.8		pCi/L					
Barium-133	U	2.83	+/-4.73	7.66		pCi/L					
Barium-140	U	-2.51	+/-7.43	11.5		pCi/L					
Beryllium-7	U	0.572	+/-27.5	50.6		pCi/L					
Bismuth-212	U	-18.7	+/-59.1	84.0		pCi/L					
Bismuth-214		21.8	+/-11.9	12.9		pCi/L					
Cerium-139	U	0.556	+/-2.81	5.09		pCi/L					
Cerium-141	U	-7.37	+/-6.99	9.95		pCi/L					
Cerium-144	U	-3.3	+/-18.7	33.6		pCi/L					
Cesium-134	U	-4.36	+/-3.85	6.10		pCi/L					
Cesium-136	U	0.434	+/-6.36	12.1		pCi/L					
Cesium-137	U	-0.248	+/-4.64	7.45	10.0	pCi/L					
Chromium-51	U	25.6	+/-34.1	62.6		pCi/L					
Cobalt-56	U	0.936	+/-3.81	6.96		pCi/L					
Cobalt-57	U	0.857	+/-2.61	4.49		pCi/L					
Cobalt-58	U	-2.14	+/-3.33	5.58		pCi/L					
Cobalt-60	U	-2.72	+/-3.51	5.84		pCi/L					
Europium-152	U	-4.71	+/-9.97	16.8		pCi/L					
Europium-154	U	4.21	+/-9.69	19.2		pCi/L					
Europium-155	U	-2.14	+/-11.2	18.9		pCi/L					
Iridium-192	U	-1.29	+/-3.44	5.88		pCi/L					
Iron-59	U	1.82	+/-8.03	13.4		pCi/L					
Lead-210	U	-388	+/-813	1210		pCi/L					
Lead-212	U	2.79	+/-8.24	12.2		pCi/L					
Lead-214	U	10.0	+/-12.9	17.0		pCi/L					
Manganese-54	U	-0.117	+/-3.78	6.23		pCi/L					
Mercury-203	U	1.37	+/-3.80	6.06		pCi/L					
Neodymium-147	U	-54.2	+/-35.6	56.0		pCi/L					
Neptunium-239	U	-1.14	+/-27.3	46.2		pCi/L					
Niobium-94	U	0.551	+/-3.11	5.69		pCi/L					
Niobium-95	U	1.88	+/-3.77	7.04		pCi/L					
Potassium-40	U	-2.25	+/-55.7	88.5		pCi/L					
Promethium-144	U	3.59	+/-3.40	6.61		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 346376024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.868	+/-4.16	7.50	pCi/L
Radium-228	U	-8.15	+/-13.4	23.4	pCi/L
Ruthenium-106	U	-25.4	+/-28.5	47.5	pCi/L
Silver-110m	U	-1.9	+/-3.25	5.56	pCi/L
Sodium-22	U	1.24	+/-3.45	6.75	pCi/L
Thallium-208	U	-0.103	+/-4.37	7.40	pCi/L
Thorium-230	U	-1540	+/-1360	2080	pCi/L
Thorium-234	U	51.1	+/-246	284	pCi/L
Tin-113	U	-4.0	+/-4.43	7.15	pCi/L
Uranium-235	U	-28.6	+/-25.2	36.1	pCi/L
Uranium-238	U	51.1	+/-246	284	pCi/L
Yttrium-88	U	3.14	+/-4.30	8.33	pCi/L
Zinc-65	U	7.17	+/-7.46	14.0	pCi/L
Zirconium-95	U	1.62	+/-6.01	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.75	+/-3.73	4.64	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	16.5	+/-3.70	3.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	91.6	+/-84.3	140	300	pCi/L	MYM1	04/29/14	1026	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	346376025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 12:10		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.322	+/-24.8	41.4		pCi/L		MJH1	04/14/14	0926 1379235	1
Americium-241	U	21.3	+/-18.6	29.1		pCi/L					
Antimony-124	U	-2.71	+/-12.9	25.0		pCi/L					
Antimony-125	U	5.35	+/-12.3	22.9		pCi/L					
Barium-133	U	-2.61	+/-6.68	9.92		pCi/L					
Barium-140	U	-0.499	+/-10.7	17.9		pCi/L					
Beryllium-7	U	-7.25	+/-38.8	71.5		pCi/L					
Bismuth-212	U	43.1	+/-77.8	151		pCi/L					
Bismuth-214		42.2	+/-19.7	17.0		pCi/L					
Cerium-139	U	-0.477	+/-3.56	6.44		pCi/L					
Cerium-141	U	2.20	+/-6.47	11.3		pCi/L					
Cerium-144	U	5.60	+/-25.4	44.0		pCi/L					
Cesium-134	U	0.0099	+/-5.37	10.0		pCi/L					
Cesium-136	U	1.69	+/-7.53	15.4		pCi/L					
Cesium-137	U	1.09	+/-7.13	9.54	10.0	pCi/L					
Chromium-51	U	-50.1	+/-47.6	67.0		pCi/L					
Cobalt-56	U	5.13	+/-3.58	9.64		pCi/L					
Cobalt-57	U	-1.41	+/-3.29	5.50		pCi/L					
Cobalt-58	U	-0.96	+/-4.94	8.95		pCi/L					
Cobalt-60	U	1.37	+/-5.63	11.3		pCi/L					
Europium-152	U	11.8	+/-14.5	20.8		pCi/L					
Europium-154	U	6.15	+/-13.3	28.5		pCi/L					
Europium-155	U	-11.5	+/-12.8	20.8		pCi/L					
Iridium-192	U	2.03	+/-4.08	7.65		pCi/L					
Iron-59	U	3.85	+/-10.3	20.8		pCi/L					
Lead-210	U	-258	+/-418	625		pCi/L					
Lead-212	U	6.80	+/-12.8	13.1		pCi/L					
Lead-214		66.0	+/-20.5	31.7		pCi/L					
Manganese-54	U	-3.08	+/-5.61	9.57		pCi/L					
Mercury-203	U	-1.67	+/-4.44	7.74		pCi/L					
Neodymium-147	U	-18.9	+/-40.5	72.4		pCi/L					
Neptunium-239	U	-28	+/-33.9	55.3		pCi/L					
Niobium-94	U	0.696	+/-4.33	8.24		pCi/L					
Niobium-95	U	1.47	+/-5.07	9.72		pCi/L					
Potassium-40	U	42.1	+/-76.9	154		pCi/L					
Promethium-144	U	-1.88	+/-4.81	8.50		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43 Project: WNUC00127  
Sample ID: 346376025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	10.2	+/-6.67	12.0	pCi/L
Radium-228	U	0.322	+/-24.8	41.4	pCi/L
Ruthenium-106	U	-19.2	+/-37.9	67.0	pCi/L
Silver-110m	U	-0.581	+/-5.14	8.17	pCi/L
Sodium-22	U	1.95	+/-4.62	9.87	pCi/L
Thallium-208	U	-1.96	+/-6.39	10.8	pCi/L
Thorium-230	U	-1050	+/-1200	2010	pCi/L
Thorium-234	U	-152	+/-187	276	pCi/L
Tin-113	U	-2.18	+/-5.70	9.81	pCi/L
Uranium-235	U	-3.19	+/-29.5	44.9	pCi/L
Uranium-238	U	-152	+/-187	276	pCi/L
Yttrium-88	U	4.26	+/-5.81	13.5	pCi/L
Zinc-65	U	-6.75	+/-12.4	18.0	pCi/L
Zirconium-95	U	-0.802	+/-8.14	15.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.02	+/-2.15	4.04	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	U	1.23	+/-2.10	3.64	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	41.5	+/-82.1	141	300	pCi/L	MYM1	04/29/14	1042	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	346376026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 12:03		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.10	+/-19.3	31.0		pCi/L		MJH1	04/14/14	0926 1379235	1
Americium-241	U	-16.2	+/-28.9	51.1		pCi/L					
Antimony-124	U	-1.33	+/-9.22	18.0		pCi/L					
Antimony-125	U	5.13	+/-10.5	19.4		pCi/L					
Barium-133	U	-0.859	+/-4.56	8.06		pCi/L					
Barium-140	U	3.12	+/-8.94	18.1		pCi/L					
Beryllium-7	U	22.1	+/-30.0	58.1		pCi/L					
Bismuth-212	U	13.4	+/-49.8	95.1		pCi/L					
Bismuth-214		29.7	+/-13.1	14.8		pCi/L					
Cerium-139	U	-0.928	+/-3.05	5.18		pCi/L					
Cerium-141	U	-4.12	+/-6.03	10.0		pCi/L					
Cerium-144	U	-0.921	+/-21.2	37.1		pCi/L					
Cesium-134	U	1.81	+/-5.05	8.44		pCi/L					
Cesium-136	U	-1.9	+/-9.28	14.6		pCi/L					
Cesium-137	U	0.329	+/-4.55	7.93	10.0	pCi/L					
Chromium-51	U	4.79	+/-37.8	68.5		pCi/L					
Cobalt-56	U	-0.669	+/-4.18	7.47		pCi/L					
Cobalt-57	U	-1.04	+/-2.89	4.97		pCi/L					
Cobalt-58	U	0.946	+/-4.16	7.80		pCi/L					
Cobalt-60	U	0.609	+/-4.63	8.86		pCi/L					
Europium-152	U	-1.25	+/-10.6	18.8		pCi/L					
Europium-154	U	-1.87	+/-14.5	23.6		pCi/L					
Europium-155	U	16.1	+/-13.9	21.1		pCi/L					
Iridium-192	U	-0.726	+/-3.96	7.01		pCi/L					
Iron-59	U	3.77	+/-5.66	11.8		pCi/L					
Lead-210	U	-134	+/-1520	2320		pCi/L					
Lead-212	U	9.47	+/-9.26	13.9		pCi/L					
Lead-214	UI	0.00	+/-20.3	19.7		pCi/L					
Manganese-54	U	-2.66	+/-4.21	7.05		pCi/L					
Mercury-203	U	0.485	+/-3.74	6.84		pCi/L					
Neodymium-147	U	16.7	+/-43.9	81.1		pCi/L					
Neptunium-239	U	-2.72	+/-29.6	51.9		pCi/L					
Niobium-94	U	-0.195	+/-4.10	7.42		pCi/L					
Niobium-95	U	-0.722	+/-4.49	7.81		pCi/L					
Potassium-40	U	64.7	+/-55.7	90.1		pCi/L					
Promethium-144	U	-0.384	+/-4.05	7.30		pCi/L					



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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 346376026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.02	+/-5.08	8.11	pCi/L
Radium-228	U	1.10	+/-19.3	31.0	pCi/L
Ruthenium-106	U	-13.6	+/-31.9	56.6	pCi/L
Silver-110m	U	1.05	+/-4.03	7.56	pCi/L
Sodium-22	U	-0.658	+/-5.09	8.32	pCi/L
Thallium-208	U	-0.519	+/-4.79	8.09	pCi/L
Thorium-230	U	-2100	+/-1920	2850	pCi/L
Thorium-234	U	-125	+/-272	449	pCi/L
Tin-113	U	7.58	+/-5.18	8.04	pCi/L
Uranium-235	U	7.91	+/-24.6	39.0	pCi/L
Uranium-238	U	-125	+/-272	449	pCi/L
Yttrium-88	U	-0.0862	+/-4.92	9.61	pCi/L
Zinc-65	U	5.74	+/-9.07	18.3	pCi/L
Zirconium-95	U	3.71	+/-8.18	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.606	+/-1.74	4.22	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		5.79	+/-3.18	4.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	97.4	+/-83.9	139	300	pCi/L	MYM1	04/29/14	1058	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	346376027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 10:55		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.5	+/-19.6	31.2		pCi/L		MJH1	04/14/14	1017 1379235	1
Americium-241	U	-2.36	+/-31.6	51.0		pCi/L					
Antimony-124	U	2.80	+/-6.98	15.6		pCi/L					
Antimony-125	U	4.79	+/-9.56	18.0		pCi/L					
Barium-133	U	3.92	+/-3.97	7.34		pCi/L					
Barium-140	U	-2.57	+/-6.50	11.8		pCi/L					
Beryllium-7	U	7.93	+/-28.9	53.7		pCi/L					
Bismuth-212	U	-6.16	+/-53.1	98.0		pCi/L					
Bismuth-214		45.7	+/-19.0	15.0		pCi/L					
Cerium-139	U	1.41	+/-3.35	5.34		pCi/L					
Cerium-141	U	4.53	+/-5.72	10.4		pCi/L					
Cerium-144	U	5.18	+/-19.7	35.0		pCi/L					
Cesium-134	U	2.67	+/-3.92	7.26		pCi/L					
Cesium-136	U	-2.84	+/-7.31	10.9		pCi/L					
Cesium-137	U	-0.979	+/-4.10	7.07	10.0	pCi/L					
Chromium-51	U	-18.3	+/-34.6	52.2		pCi/L					
Cobalt-56	U	-1.34	+/-3.92	7.02		pCi/L					
Cobalt-57	U	-0.362	+/-2.56	4.45		pCi/L					
Cobalt-58	U	-0.23	+/-3.09	5.83		pCi/L					
Cobalt-60	U	1.11	+/-3.39	7.11		pCi/L					
Europium-152	U	3.51	+/-10.8	20.0		pCi/L					
Europium-154	U	-1.01	+/-9.47	18.6		pCi/L					
Europium-155	U	2.43	+/-11.0	19.7		pCi/L					
Iridium-192	U	0.121	+/-3.45	6.29		pCi/L					
Iron-59	U	0.588	+/-8.89	14.5		pCi/L					
Lead-210	U	-535	+/-1310	2320		pCi/L					
Lead-212	U	10.5	+/-9.90	14.1		pCi/L					
Lead-214		43.4	+/-12.8	12.7		pCi/L					
Manganese-54	U	3.28	+/-4.25	7.67		pCi/L					
Mercury-203	U	0.169	+/-4.02	6.47		pCi/L					
Neodymium-147	U	-31.9	+/-34.4	55.5		pCi/L					
Neptunium-239	U	10.8	+/-29.7	53.3		pCi/L					
Niobium-94	U	-0.611	+/-4.10	6.51		pCi/L					
Niobium-95	U	0.890	+/-3.67	7.04		pCi/L					
Potassium-40	U	41.3	+/-50.6	65.3		pCi/L					
Promethium-144	U	-0.943	+/-3.57	6.50		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47  
Sample ID: 346376027  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.39	+/-4.34	7.41	pCi/L
Radium-228	U	12.5	+/-19.6	31.2	pCi/L
Ruthenium-106	U	1.38	+/-33.6	60.2	pCi/L
Silver-110m	U	-1.1	+/-3.35	6.10	pCi/L
Sodium-22	U	0.317	+/-3.21	6.54	pCi/L
Thallium-208	U	0.470	+/-4.91	7.18	pCi/L
Thorium-230	U	1920	+/-2060	2990	pCi/L
Thorium-234	U	58.1	+/-359	429	pCi/L
Tin-113	U	-1.75	+/-4.14	7.24	pCi/L
Uranium-235	U	13.5	+/-27.4	40.8	pCi/L
Uranium-238	U	58.1	+/-359	429	pCi/L
Yttrium-88	U	0.0249	+/-4.16	8.24	pCi/L
Zinc-65	U	-4.74	+/-9.37	16.1	pCi/L
Zirconium-95	U	-0.323	+/-6.73	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.349	+/-2.19	4.60	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		59.6	+/-6.50	3.69	5.00	pCi/L					
Alpha	U	2.73	+/-2.54	3.61	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta		63.6	+/-7.22	5.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.5	+/-94.1	166	300	pCi/L	MYM1	04/30/14	2302	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47  
Sample ID: 346376027

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	346376028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 11:20		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.93	+/-19.2	31.0		pCi/L		MJH1	04/15/14	1157 1379235	1
Americium-241	U	3.25	+/-22.5	34.5		pCi/L					
Antimony-124	U	2.26	+/-10.2	20.0		pCi/L					
Antimony-125	U	3.64	+/-9.05	16.9		pCi/L					
Barium-133	U	-5.12	+/-5.12	8.57		pCi/L					
Barium-140	U	-3.06	+/-7.16	12.8		pCi/L					
Beryllium-7	U	14.8	+/-32.8	61.0		pCi/L					
Bismuth-212	U	-30	+/-54.4	91.8		pCi/L					
Bismuth-214		21.8	+/-11.1	15.1		pCi/L					
Cerium-139	U	0.575	+/-3.50	5.99		pCi/L					
Cerium-141	U	3.65	+/-7.44	12.0		pCi/L					
Cerium-144	U	-7.73	+/-23.6	39.7		pCi/L					
Cesium-134	U	0.0818	+/-3.47	6.35		pCi/L					
Cesium-136	U	1.06	+/-8.95	16.9		pCi/L					
Cesium-137	U	2.62	+/-4.00	7.57	10.0	pCi/L					
Chromium-51	U	-40.2	+/-46.5	69.9		pCi/L					
Cobalt-56	U	-2.33	+/-4.18	7.01		pCi/L					
Cobalt-57	U	0.267	+/-3.18	5.45		pCi/L					
Cobalt-58	U	-2.86	+/-4.70	7.83		pCi/L					
Cobalt-60	U	-0.219	+/-4.17	7.79		pCi/L					
Europium-152	U	-5.56	+/-11.5	20.0		pCi/L					
Europium-154	U	-0.721	+/-10.9	20.4		pCi/L					
Europium-155	U	-5.08	+/-13.3	22.4		pCi/L					
Iridium-192	U	1.18	+/-3.87	7.05		pCi/L					
Iron-59	U	1.58	+/-9.51	15.8		pCi/L					
Lead-210	U	313	+/-632	638		pCi/L					
Lead-212	U	2.58	+/-10.9	14.0		pCi/L					
Lead-214	U	-1.57	+/-10.7	16.7		pCi/L					
Manganese-54	U	0.728	+/-3.83	6.97		pCi/L					
Mercury-203	U	0.482	+/-4.24	7.62		pCi/L					
Neodymium-147	U	4.39	+/-48.2	87.1		pCi/L					
Neptunium-239	U	-28.2	+/-33.1	54.3		pCi/L					
Niobium-94	U	-1.84	+/-3.75	6.36		pCi/L					
Niobium-95	U	-0.825	+/-4.02	7.04		pCi/L					
Potassium-40	U	-14.1	+/-62.0	96.1		pCi/L					
Promethium-144	U	2.50	+/-4.09	7.59		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 346376028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.381	+/-5.02	9.00	pCi/L
Radium-228	U	-2.93	+/-19.2	31.0	pCi/L
Ruthenium-106	U	-1.16	+/-34.6	61.7	pCi/L
Silver-110m	U	0.476	+/-3.67	6.64	pCi/L
Sodium-22	U	0.095	+/-3.80	7.22	pCi/L
Thallium-208	U	-1.8	+/-8.21	8.42	pCi/L
Thorium-230	U	199	+/-1500	2290	pCi/L
Thorium-234	U	83.8	+/-217	292	pCi/L
Tin-113	U	5.85	+/-8.06	8.80	pCi/L
Uranium-235	U	-0.635	+/-28.7	42.5	pCi/L
Uranium-238	U	83.8	+/-217	292	pCi/L
Yttrium-88	U	-1.5	+/-4.53	8.15	pCi/L
Zinc-65	U	1.94	+/-7.45	12.9	pCi/L
Zirconium-95	U	4.54	+/-7.73	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.02	+/-1.75	3.19	5.00	pCi/L	DXG3	05/05/14	1304	1382544	2
Beta		10.2	+/-3.28	4.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.4	+/-95.0	165	300	pCi/L	MYM1	04/30/14	2318	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## QC Summary

Report Date: May 14, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 346376

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1386260										
QC1203083889	346376010	DUP									
Uranium-233/234		7.65		7.27	pCi/L	5.07		(0%-20%)	HAKB	05/12/14	16:50
	Uncertainty	+/-1.05		+/-1.08							
Uranium-235/236		0.277		0.589	pCi/L	72.1		(0% - 100%)			
	Uncertainty	+/-0.244		+/-0.388							
Uranium-238		3.30		2.98	pCi/L	10.4		(0%-20%)			
	Uncertainty	+/-0.696		+/-0.727							
QC1203083890	LCS										
Uranium-233/234				26.4	pCi/L					05/12/14	16:50
	Uncertainty			+/-1.98							
Uranium-235/236				1.25	pCi/L						
	Uncertainty			+/-0.521							
Uranium-238	27.2			25.6	pCi/L		94.1	(75%-125%)			
	Uncertainty			+/-1.94							
QC1203083888	MB										
Uranium-233/234			U	-0.0217	pCi/L					05/12/14	16:50
	Uncertainty			+/-0.144							
Uranium-235/236			U	0.0258	pCi/L						
	Uncertainty			+/-0.162							
Uranium-238			U	0.0631	pCi/L						
	Uncertainty			+/-0.155							
<b>Rad Gamma Spec</b>											
Batch	1379234										
QC1203065983	346376001	DUP									
Actinium-228		U	8.07	U	-1.87	pCi/L	N/A		N/A	MJH1	04/16/14 14:36
	Uncertainty		+/-23.2		+/-15.6						
Americium-241		U	0.904	U	2.38	pCi/L	N/A		N/A		
	Uncertainty		+/-28.3		+/-12.0						
Antimony-124		U	0.828	U	-0.171	pCi/L	N/A		N/A		
	Uncertainty		+/-10.1		+/-7.33						
Antimony-125		U	-0.631	U	-7.12	pCi/L	N/A		N/A		
	Uncertainty		+/-10.2		+/-9.94						
Barium-133		U	-3.18	U	-0.244	pCi/L	N/A		N/A		
	Uncertainty		+/-5.00		+/-4.21						
Barium-140		U	11.3	U	11.3	pCi/L	N/A		N/A		
	Uncertainty		+/-9.31		+/-7.76						
Beryllium-7		U	-5.16	U	34.1	pCi/L	N/A		N/A		
	Uncertainty		+/-35.5		+/-29.9						
Bismuth-212		U	14.9	U	51.3	pCi/L	N/A		N/A		
	Uncertainty		+/-65.1		+/-49.4						
Bismuth-214		U	14.1	U	2.48	pCi/L	N/A		N/A		

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
	Uncertainty										
		+/-12.3		+/-9.59							
Cerium-139	U	1.06	U	-2.8	pCi/L	N/A		N/A	MJH1	04/16/14	14:36
	Uncertainty	+/-3.50		+/-2.93							
Cerium-141	U	-2.81	U	-2.29	pCi/L	N/A		N/A			
	Uncertainty	+/-8.53		+/-6.35							
Cerium-144	U	-7.7	U	2.20	pCi/L	N/A		N/A			
	Uncertainty	+/-22.6		+/-20.8							
Cesium-134	U	-1.28	U	-0.793	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-4.07							
Cesium-136	U	1.53	U	0.412	pCi/L	N/A		N/A			
	Uncertainty	+/-9.71		+/-7.62							
Cesium-137	U	1.97	U	-0.403	pCi/L	N/A		N/A			
	Uncertainty	+/-3.91		+/-3.93							
Chromium-51	U	-13.9	U	24.1	pCi/L	N/A		N/A			
	Uncertainty	+/-42.6		+/-33.2							
Cobalt-56	U	2.61	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-3.87							
Cobalt-57	U	1.02	U	1.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.06		+/-2.71							
Cobalt-58	U	-2.08	U	-0.328	pCi/L	N/A		N/A			
	Uncertainty	+/-4.04		+/-3.40							
Cobalt-60	U	3.28	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-4.09		+/-4.14							
Europium-152	U	-7.44	U	-2.09	pCi/L	N/A		N/A			
	Uncertainty	+/-12.3		+/-9.72							
Europium-154	U	-3.63	U	-4.05	pCi/L	N/A		N/A			
	Uncertainty	+/-12.7		+/-9.83							
Europium-155	U	-8.4	U	-0.107	pCi/L	N/A		N/A			
	Uncertainty	+/-14.3		+/-12.1							
Iridium-192	U	-4.48	U	1.47	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-3.30							
Iron-59	U	-0.829	U	-1.89	pCi/L	N/A		N/A			
	Uncertainty	+/-7.52		+/-6.95							
Lead-210	U	-39.8	U	-173	pCi/L	N/A		N/A			
	Uncertainty	+/-1030		+/-254							
Lead-212	U	12.3	U	0.963	pCi/L	N/A		N/A			
	Uncertainty	+/-11.7		+/-6.80							
Lead-214	U	-14.6	U	5.13	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-11.8							
Manganese-54	U	4.66	U	0.499	pCi/L	N/A		N/A			
	Uncertainty	+/-4.21		+/-3.59							
Mercury-203	U	-4.38	U	-0.999	pCi/L	N/A		N/A			
	Uncertainty	+/-4.47		+/-3.54							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Neodymium-147	U	-28.8	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-46.5		+/-43.2							
Neptunium-239	U	-10.3	U	9.87	pCi/L	N/A		N/A	MJH1	04/16/14	14:36
	Uncertainty	+/-32.9		+/-25.9							
Niobium-94	U	-4.3	U	-0.831	pCi/L	N/A		N/A			
	Uncertainty	+/-4.77		+/-3.34							
Niobium-95	U	0.320	U	1.64	pCi/L	N/A		N/A			
	Uncertainty	+/-3.98		+/-2.98							
Potassium-40	UI	0.00	U	49.6	pCi/L	N/A		N/A			
	Uncertainty	+/-63.9		+/-70.6							
Promethium-144	U	1.87	U	1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-3.66							
Promethium-146	U	1.98	U	0.864	pCi/L	N/A		N/A			
	Uncertainty	+/-4.93		+/-4.16							
Radium-228	U	8.07	U	-1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-23.2		+/-15.6							
Ruthenium-106	U	11.4	U	9.90	pCi/L	N/A		N/A			
	Uncertainty	+/-35.7		+/-28.5							
Silver-110m	U	0.286	U	1.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.19		+/-4.52							
Sodium-22	U	-1.21	U	-1.57	pCi/L	N/A		N/A			
	Uncertainty	+/-4.47		+/-3.45							
Thallium-208	U	5.89	U	-1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-7.31		+/-4.00							
Thorium-230	U	-2030	U	420	pCi/L	N/A		N/A			
	Uncertainty	+/-1820		+/-924							
Thorium-234	U	82.0	U	30.2	pCi/L	N/A		N/A			
	Uncertainty	+/-371		+/-153							
Tin-113	U	1.74	U	-0.398	pCi/L	N/A		N/A			
	Uncertainty	+/-4.83		+/-4.58							
Uranium-235	U	1.97	U	3.62	pCi/L	N/A		N/A			
	Uncertainty	+/-30.2		+/-23.5							
Uranium-238	U	82.0	U	30.2	pCi/L	N/A		N/A			
	Uncertainty	+/-371		+/-153							
Yttrium-88	U	-0.109	U	-0.909	pCi/L	N/A		N/A			
	Uncertainty	+/-4.99		+/-3.52							
Zinc-65	U	-4.01	U	3.70	pCi/L	N/A		N/A			
	Uncertainty	+/-8.02		+/-6.92							
Zirconium-95	U	4.10	U	0.338	pCi/L	N/A		N/A			
	Uncertainty	+/-7.39		+/-6.25							
QC1203065984	LCS										
Actinium-228			U	117	pCi/L					04/15/14	14:39
	Uncertainty			+/-1080							
Americium-241	1.11E+05			1.17E+05	pCi/L		106	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
				+/-3190							
Antimony-124			U	-70.9	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-224							
Antimony-125			U	-67.1	pCi/L						
	Uncertainty			+/-554							
Barium-133			U	8.78	pCi/L						
	Uncertainty			+/-218							
Barium-140			U	86.4	pCi/L						
	Uncertainty			+/-140							
Beryllium-7			U	-1140	pCi/L						
	Uncertainty			+/-1760							
Bismuth-212			U	856	pCi/L						
	Uncertainty			+/-2850							
Bismuth-214			U	-94.8	pCi/L						
	Uncertainty			+/-363							
Cerium-139				1570	pCi/L						
	Uncertainty			+/-163							
Cerium-141			U	-21.9	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	625	pCi/L						
	Uncertainty			+/-910							
Cesium-134			U	37.1	pCi/L						
	Uncertainty			+/-256							
Cesium-136			U	73.2	pCi/L						
	Uncertainty			+/-411							
Cesium-137	45200			45800	pCi/L		101	(75%-125%)			
	Uncertainty			+/-839							
Chromium-51			U	-1010	pCi/L						
	Uncertainty			+/-1420							
Cobalt-56			U	44.8	pCi/L						
	Uncertainty			+/-253							
Cobalt-57				5840	pCi/L						
	Uncertainty			+/-247							
Cobalt-58			U	-10.4	pCi/L						
	Uncertainty			+/-238							
Cobalt-60	57800			58100	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1100							
Europium-152			U	-76.8	pCi/L						
	Uncertainty			+/-506							
Europium-154			U	-291	pCi/L						
	Uncertainty			+/-380							
Europium-155			U	-372	pCi/L						
	Uncertainty			+/-482							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Iridium-192			U	96.0	pCi/L						
	Uncertainty			+/-157							
Iron-59			U	-56.7	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-555							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-76600							
Lead-212			U	-23.6	pCi/L						
	Uncertainty			+/-270							
Lead-214			U	-41.4	pCi/L						
	Uncertainty			+/-376							
Manganese-54			U	-231	pCi/L						
	Uncertainty			+/-244							
Mercury-203			U	-52.9	pCi/L						
	Uncertainty			+/-156							
Neodymium-147			U	-166	pCi/L						
	Uncertainty			+/-1460							
Neptunium-239			U	-273	pCi/L						
	Uncertainty			+/-1410							
Niobium-94			U	35.0	pCi/L						
	Uncertainty			+/-189							
Niobium-95			U	259	pCi/L						
	Uncertainty			+/-213							
Potassium-40			U	-720	pCi/L						
	Uncertainty			+/-985							
Promethium-144			U	55.2	pCi/L						
	Uncertainty			+/-212							
Promethium-146			U	63.9	pCi/L						
	Uncertainty			+/-316							
Radium-228			U	117	pCi/L						
	Uncertainty			+/-1080							
Ruthenium-106			U	765	pCi/L						
	Uncertainty			+/-1900							
Silver-110m				1600	pCi/L						
	Uncertainty			+/-265							
Sodium-22			U	-88.1	pCi/L						
	Uncertainty			+/-132							
Thallium-208			U	49.8	pCi/L						
	Uncertainty			+/-186							
Thorium-230			U	59000	pCi/L						
	Uncertainty			+/-66100							
Thorium-234			U	-20300	pCi/L						
	Uncertainty			+/-8380							
Tin-113				1210	pCi/L						
	Uncertainty			+/-492							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Uranium-235			U	-420	pCi/L						
	Uncertainty			+/-832							
Uranium-238			U	-20300	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-8380							
Yttrium-88				1480	pCi/L						
	Uncertainty			+/-264							
Zinc-65				20200	pCi/L						
	Uncertainty			+/-1300							
Zirconium-95			U	1.65	pCi/L						
	Uncertainty			+/-376							
QC1203065982	MB										
Actinium-228			U	-9.42	pCi/L					04/16/14	14:36
	Uncertainty			+/-23.6							
Americium-241			U	7.18	pCi/L						
	Uncertainty			+/-5.64							
Antimony-124			U	-6.45	pCi/L						
	Uncertainty			+/-10.7							
Antimony-125			U	-1.92	pCi/L						
	Uncertainty			+/-9.70							
Barium-133			U	-0.566	pCi/L						
	Uncertainty			+/-4.41							
Barium-140			U	0.201	pCi/L						
	Uncertainty			+/-6.51							
Beryllium-7			U	28.8	pCi/L						
	Uncertainty			+/-32.0							
Bismuth-212			U	48.9	pCi/L						
	Uncertainty			+/-69.7							
Bismuth-214			U	3.79	pCi/L						
	Uncertainty			+/-13.5							
Cerium-139			U	-2.3	pCi/L						
	Uncertainty			+/-2.68							
Cerium-141			U	4.71	pCi/L						
	Uncertainty			+/-6.69							
Cerium-144			U	3.21	pCi/L						
	Uncertainty			+/-16.4							
Cesium-134			U	-0.648	pCi/L						
	Uncertainty			+/-4.68							
Cesium-136			U	-1.82	pCi/L						
	Uncertainty			+/-7.38							
Cesium-137			U	2.92	pCi/L						
	Uncertainty			+/-4.49							
Chromium-51			U	7.05	pCi/L						
	Uncertainty			+/-29.4							
Cobalt-56			U	-0.769	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch		1379234									
Cobalt-57				+/-4.57							
			U	0.343	pCi/L				MJH1	04/16/14	14:36
Cobalt-58	Uncertainty			+/-2.01							
			U	0.243	pCi/L						
Cobalt-60	Uncertainty			+/-4.13							
			U	-1.17	pCi/L						
Europium-152	Uncertainty			+/-4.08							
			U	-1.56	pCi/L						
Europium-154	Uncertainty			+/-9.66							
			U	-3.39	pCi/L						
Europium-155	Uncertainty			+/-14.5							
			U	1.23	pCi/L						
Iridium-192	Uncertainty			+/-9.27							
			U	-0.265	pCi/L						
Iron-59	Uncertainty			+/-3.12							
			U	4.46	pCi/L						
Lead-210	Uncertainty			+/-8.81							
			U	-28	pCi/L						
Lead-212	Uncertainty			+/-91.1							
			U	1.27	pCi/L						
Lead-214	Uncertainty			+/-8.23							
			U	0.238	pCi/L						
Manganese-54	Uncertainty			+/-8.43							
			U	1.49	pCi/L						
Mercury-203	Uncertainty			+/-4.06							
			U	-0.0579	pCi/L						
Neodymium-147	Uncertainty			+/-3.31							
			U	19.0	pCi/L						
Neptunium-239	Uncertainty			+/-32.0							
			U	5.26	pCi/L						
Niobium-94	Uncertainty			+/-21.3							
			U	-1.9	pCi/L						
Niobium-95	Uncertainty			+/-4.49							
			U	3.53	pCi/L						
Potassium-40	Uncertainty			+/-4.63							
			U	6.31	pCi/L						
Promethium-144	Uncertainty			+/-58.2							
			U	0.417	pCi/L						
Promethium-146	Uncertainty			+/-4.51							
			U	2.18	pCi/L						
Radium-228	Uncertainty			+/-4.72							
			U	-9.42	pCi/L						
	Uncertainty			+/-23.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1379234										
Ruthenium-106			U	-18.8	pCi/L						
	Uncertainty			+/-35.8							
Silver-110m			U	-0.947	pCi/L				MJH1	04/16/14	14:36
	Uncertainty			+/-4.68							
Sodium-22			U	-0.263	pCi/L						
	Uncertainty			+/-4.94							
Thallium-208			U	-2.3	pCi/L						
	Uncertainty			+/-5.71							
Thorium-230			U	-120	pCi/L						
	Uncertainty			+/-482							
Thorium-234			U	-39	pCi/L						
	Uncertainty			+/-79.7							
Tin-113			U	0.740	pCi/L						
	Uncertainty			+/-4.84							
Uranium-235			U	18.8	pCi/L						
	Uncertainty			+/-26.7							
Uranium-238			U	-39	pCi/L						
	Uncertainty			+/-79.7							
Yttrium-88			U	3.16	pCi/L						
	Uncertainty			+/-5.05							
Zinc-65			U	-10.9	pCi/L						
	Uncertainty			+/-10.2							
Zirconium-95			U	0.329	pCi/L						
	Uncertainty			+/-8.33							
Batch	1379235										
QC1203065986 346376021 DUP											
Actinium-228	U	1.45	U	0.584	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-23.9		+/-19.8							
Americium-241	U	-12	U	25.1	pCi/L	N/A		N/A			
	Uncertainty	+/-18.9		+/-29.9							
Antimony-124	U	2.82	U	1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-6.62		+/-10.4							
Antimony-125	U	-1.91	U	0.535	pCi/L	N/A		N/A			
	Uncertainty	+/-10.2		+/-9.47							
Barium-133	U	-2.0	U	3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-4.36		+/-4.95							
Barium-140	U	2.81	U	1.69	pCi/L	N/A		N/A			
	Uncertainty	+/-5.83		+/-8.11							
Beryllium-7	U	-21.5	U	27.6	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-32.2							
Bismuth-212	U	-40.4	U	8.24	pCi/L	N/A		N/A			
	Uncertainty	+/-64.4		+/-47.3							
Bismuth-214		15.9	U	6.34	pCi/L	25.5		(0% - 100%)			
	Uncertainty	+/-14.5		+/-12.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Cerium-139	U	-2.33	U	0.181	pCi/L	N/A		N/A			
	Uncertainty	+/-3.67		+/-3.39							
Cerium-141	U	1.98	U	3.28	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-7.50		+/-5.91							
Cerium-144	U	10.2	U	-7.66	pCi/L	N/A		N/A			
	Uncertainty	+/-19.1		+/-21.5							
Cesium-134	U	1.44	U	0.0559	pCi/L	N/A		N/A			
	Uncertainty	+/-3.55		+/-3.77							
Cesium-136	U	2.78	U	3.75	pCi/L	N/A		N/A			
	Uncertainty	+/-6.91		+/-6.69							
Cesium-137	U	1.40	U	-2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-3.43		+/-4.31							
Chromium-51	U	12.8	U	-6.21	pCi/L	N/A		N/A			
	Uncertainty	+/-29.6		+/-36.6							
Cobalt-56	U	2.22	U	3.07	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-4.28							
Cobalt-57	U	-0.293	U	0.319	pCi/L	N/A		N/A			
	Uncertainty	+/-2.50		+/-2.68							
Cobalt-58	U	2.89	U	-1.8	pCi/L	N/A		N/A			
	Uncertainty	+/-3.48		+/-4.46							
Cobalt-60	U	3.41	U	2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-4.10							
Europium-152	U	1.95	U	6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-10.1							
Europium-154	U	-4.87	U	-3.45	pCi/L	N/A		N/A			
	Uncertainty	+/-9.23		+/-11.0							
Europium-155	U	11.5	U	-10.4	pCi/L	N/A		N/A			
	Uncertainty	+/-10.7		+/-10.5							
Iridium-192	U	-0.24	U	1.09	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-3.61							
Iron-59	U	4.41	U	-1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-7.16		+/-6.72							
Lead-210	U	560	U	687	pCi/L	N/A		N/A			
	Uncertainty	+/-740		+/-1250							
Lead-212	U	9.09	U	2.12	pCi/L	N/A		N/A			
	Uncertainty	+/-7.58		+/-8.17							
Lead-214	UI	0.00	U	9.12	pCi/L	N/A		N/A			
	Uncertainty	+/-13.9		+/-11.4							
Manganese-54	U	-0.505	U	-1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-3.05		+/-3.71							
Mercury-203	U	-1.05	U	-1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.24		+/-3.57							
Neodymium-147	U	1.44	U	-10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-39.8		+/-48.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Neptunium-239	U	0.739	U	-11.7	pCi/L	N/A		N/A			
	Uncertainty	+/-26.5		+/-26.7							
Niobium-94	U	1.30	U	1.99	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-2.99		+/-3.55							
Niobium-95	U	2.28	U	-5.29	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-3.91							
Potassium-40	U	-11.9	U	4.72	pCi/L	N/A		N/A			
	Uncertainty	+/-50.8		+/-54.2							
Promethium-144	U	-0.515	U	-2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-3.51							
Promethium-146	U	1.39	U	-1.76	pCi/L	N/A		N/A			
	Uncertainty	+/-4.09		+/-4.11							
Radium-228	U	1.45	U	0.584	pCi/L	N/A		N/A			
	Uncertainty	+/-23.9		+/-19.8							
Ruthenium-106	U	-14	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-30.1		+/-35.9							
Silver-110m	U	0.655	U	2.96	pCi/L	N/A		N/A			
	Uncertainty	+/-3.00		+/-3.40							
Sodium-22	U	-3.1	U	0.0971	pCi/L	N/A		N/A			
	Uncertainty	+/-3.44		+/-3.67							
Thallium-208	U	0.474	U	4.79	pCi/L	N/A		N/A			
	Uncertainty	+/-5.64		+/-5.67							
Thorium-230	U	1510	U	259	pCi/L	N/A		N/A			
	Uncertainty	+/-2040		+/-2210							
Thorium-234	U	-35.7	U	124	pCi/L	N/A		N/A			
	Uncertainty	+/-223		+/-327							
Tin-113	U	0.440	U	0.0283	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-4.65							
Uranium-235	U	7.03	U	4.54	pCi/L	N/A		N/A			
	Uncertainty	+/-26.6		+/-26.2							
Uranium-238	U	-35.7	U	124	pCi/L	N/A		N/A			
	Uncertainty	+/-223		+/-327							
Yttrium-88	U	3.56	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-4.11		+/-4.05							
Zinc-65	U	-3.75	U	-4.07	pCi/L	N/A		N/A			
	Uncertainty	+/-7.56		+/-8.90							
Zirconium-95	U	2.10	U	-3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-5.72		+/-6.89							
QC1203065987	LCS										
Actinium-228			U	-89.8	pCi/L					04/15/14	13:55
	Uncertainty			+/-1200							
Americium-241	1.11E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-2660							
Antimony-124			U	124	pCi/L						
	Uncertainty										



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1379235										
Antimony-125	Uncertainty		U	+/-219	pCi/L				MJH1	04/15/14	13:55
				150							
Barium-133	Uncertainty		U	+/-613	pCi/L						
				-138							
Barium-140	Uncertainty		U	+/-255	pCi/L						
				35.5							
Beryllium-7	Uncertainty		U	+/-150	pCi/L						
				-1070							
Bismuth-212	Uncertainty		U	+/-1850	pCi/L						
				1520							
Bismuth-214	Uncertainty		U	+/-2860	pCi/L						
				-162							
Cerium-139	Uncertainty			+/-407	pCi/L						
				1370							
Cerium-141	Uncertainty		U	+/-214	pCi/L						
				9.21							
Cerium-144	Uncertainty		U	+/-245	pCi/L						
				-448							
Cesium-134	Uncertainty		U	+/-1150	pCi/L						
				45.0							
Cesium-136	Uncertainty		U	+/-297	pCi/L						
				-443							
Cesium-137	Uncertainty			+/-451	pCi/L		103	(75%-125%)			
				46700							
Chromium-51	Uncertainty		U	+/-949	pCi/L						
				92.1							
Cobalt-56	Uncertainty		U	+/-1610	pCi/L						
				94.9							
Cobalt-57	Uncertainty			+/-285	pCi/L						
				5730							
Cobalt-58	Uncertainty		U	+/-222	pCi/L						
				8.55							
Cobalt-60	Uncertainty			+/-255	pCi/L		103	(75%-125%)			
				59400							
Europium-152	Uncertainty		U	+/-1220	pCi/L						
				163							
Europium-154	Uncertainty		U	+/-576	pCi/L						
				-100							
Europium-155	Uncertainty		U	+/-419	pCi/L						
				268							
Iridium-192	Uncertainty		U	+/-590	pCi/L						
				137							
	Uncertainty			+/-182							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Iron-59			U	254	pCi/L						
	Uncertainty			+/-591							
Lead-210				1.46E+06	pCi/L				MJH1	04/15/14	13:55
	Uncertainty			+/-99500							
Lead-212			U	217	pCi/L						
	Uncertainty			+/-308							
Lead-214			U	218	pCi/L						
	Uncertainty			+/-436							
Manganese-54			U	-42	pCi/L						
	Uncertainty			+/-265							
Mercury-203			U	-40.2	pCi/L						
	Uncertainty			+/-178							
Neodymium-147			U	771	pCi/L						
	Uncertainty			+/-1670							
Neptunium-239			U	-755	pCi/L						
	Uncertainty			+/-1710							
Niobium-94			U	37.8	pCi/L						
	Uncertainty			+/-201							
Niobium-95			U	154	pCi/L						
	Uncertainty			+/-238							
Potassium-40			U	808	pCi/L						
	Uncertainty			+/-1440							
Promethium-144			U	15.2	pCi/L						
	Uncertainty			+/-205							
Promethium-146			U	-169	pCi/L						
	Uncertainty			+/-305							
Radium-228			U	-89.8	pCi/L						
	Uncertainty			+/-1200							
Ruthenium-106			U	-353	pCi/L						
	Uncertainty			+/-1900							
Silver-110m				1790	pCi/L						
	Uncertainty			+/-293							
Sodium-22			U	-44.2	pCi/L						
	Uncertainty			+/-146							
Thallium-208			U	-70.9	pCi/L						
	Uncertainty			+/-209							
Thorium-230				2.06E+05	pCi/L						
	Uncertainty			+/-87800							
Thorium-234			U	-19600	pCi/L						
	Uncertainty			+/-10400							
Tin-113				1280	pCi/L						
	Uncertainty			+/-414							
Uranium-235			U	444	pCi/L						
	Uncertainty			+/-989							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Uranium-238			U	-19600	pCi/L						
	Uncertainty			+/-10400							
Yttrium-88				1540	pCi/L				MJH1	04/15/14	13:55
	Uncertainty			+/-272							
Zinc-65				19500	pCi/L						
	Uncertainty			+/-1530							
Zirconium-95			U	111	pCi/L						
	Uncertainty			+/-414							
QC1203065985	MB										
Actinium-228			U	1.24	pCi/L					04/15/14	14:16
	Uncertainty			+/-16.3							
Americium-241			U	-10	pCi/L						
	Uncertainty			+/-29.5							
Antimony-124			U	-0.752	pCi/L						
	Uncertainty			+/-7.96							
Antimony-125			U	-6.31	pCi/L						
	Uncertainty			+/-9.32							
Barium-133			U	-3.42	pCi/L						
	Uncertainty			+/-4.38							
Barium-140			U	-3.9	pCi/L						
	Uncertainty			+/-5.23							
Beryllium-7			U	12.2	pCi/L						
	Uncertainty			+/-31.3							
Bismuth-212			U	15.8	pCi/L						
	Uncertainty			+/-58.8							
Bismuth-214			U	2.00	pCi/L						
	Uncertainty			+/-9.90							
Cerium-139			U	1.22	pCi/L						
	Uncertainty			+/-2.87							
Cerium-141			U	2.87	pCi/L						
	Uncertainty			+/-8.53							
Cerium-144			U	13.5	pCi/L						
	Uncertainty			+/-18.7							
Cesium-134			U	4.37	pCi/L						
	Uncertainty			+/-3.85							
Cesium-136			U	3.50	pCi/L						
	Uncertainty			+/-5.67							
Cesium-137			U	-0.465	pCi/L						
	Uncertainty			+/-3.38							
Chromium-51			U	2.48	pCi/L						
	Uncertainty			+/-29.2							
Cobalt-56			U	-0.429	pCi/L						
	Uncertainty			+/-3.61							
Cobalt-57			U	-0.203	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch		1379235									
Cobalt-58				+/-2.60							
			U	1.61	pCi/L				MJH1	04/15/14	14:16
Cobalt-60	Uncertainty			+/-3.45							
			U	-0.533	pCi/L						
Europium-152	Uncertainty			+/-3.80							
			U	-2.5	pCi/L						
Europium-154	Uncertainty			+/-11.3							
			U	9.31	pCi/L						
Europium-155	Uncertainty			+/-11.0							
			U	4.01	pCi/L						
Iridium-192	Uncertainty			+/-10.1							
			U	-0.742	pCi/L						
Iron-59	Uncertainty			+/-3.33							
			U	-3.72	pCi/L						
Lead-210	Uncertainty			+/-6.66							
			U	331	pCi/L						
Lead-212	Uncertainty			+/-1020							
			U	4.29	pCi/L						
Lead-214	Uncertainty			+/-14.2							
			U	4.83	pCi/L						
Manganese-54	Uncertainty			+/-9.97							
			U	-2.54	pCi/L						
Mercury-203	Uncertainty			+/-3.62							
			U	2.24	pCi/L						
Neodymium-147	Uncertainty			+/-3.47							
			U	-12.2	pCi/L						
Neptunium-239	Uncertainty			+/-26.9							
			U	-30.7	pCi/L						
Niobium-94	Uncertainty			+/-28.1							
			U	-0.96	pCi/L						
Niobium-95	Uncertainty			+/-3.74							
			U	0.852	pCi/L						
Potassium-40	Uncertainty			+/-3.33							
			U	5.75	pCi/L						
Promethium-144	Uncertainty			+/-55.8							
			U	-1.05	pCi/L						
Promethium-146	Uncertainty			+/-3.57							
			U	1.40	pCi/L						
Radium-228	Uncertainty			+/-4.05							
			U	1.24	pCi/L						
Ruthenium-106	Uncertainty			+/-16.3							
			U	-26.3	pCi/L						
	Uncertainty			+/-31.5							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Silver-110m			U	-0.344	pCi/L						
	Uncertainty			+/-3.11							
Sodium-22			U	2.85	pCi/L				MJH1	04/15/14	14:16
	Uncertainty			+/-3.89							
Thallium-208			U	-2.5	pCi/L						
	Uncertainty			+/-4.81							
Thorium-230			U	1570	pCi/L						
	Uncertainty			+/-2000							
Thorium-234			U	210	pCi/L						
	Uncertainty			+/-380							
Tin-113			U	-2.27	pCi/L						
	Uncertainty			+/-4.11							
Uranium-235			U	11.7	pCi/L						
	Uncertainty			+/-34.8							
Uranium-238			U	210	pCi/L						
	Uncertainty			+/-380							
Yttrium-88			U	0.728	pCi/L						
	Uncertainty			+/-3.24							
Zinc-65			U	2.55	pCi/L						
	Uncertainty			+/-6.74							
Zirconium-95			U	0.827	pCi/L						
	Uncertainty			+/-7.30							
<b>Rad Gas Flow</b>											
Batch	1382543										
QC1203074576	346376003	DUP									
Alpha		5.23		4.28	pCi/L	20.0		(0% - 100%)	DXG3	05/05/14	17:46
	Uncertainty	+/-1.93		+/-1.71							
Alpha	U	3.85	U	2.20	pCi/L	N/A		N/A		05/06/14	12:07
	Uncertainty	+/-3.26		+/-2.85							
Beta		127		121	pCi/L	4.77		(0%-20%)		05/05/14	17:46
	Uncertainty	+/-3.68		+/-3.38							
Beta		120		110	pCi/L	8.86		(0%-20%)		05/06/14	12:07
	Uncertainty	+/-6.38		+/-7.01							
QC1203074579	LCS										
Alpha		123		136	pCi/L		110	(75%-125%)		05/06/14	07:21
	Uncertainty			+/-13.1							
Beta		454		542	pCi/L		119	(75%-125%)			
	Uncertainty			+/-20.2							
QC1203074575	MB										
Alpha			U	-0.204	pCi/L					05/06/14	07:21
	Uncertainty			+/-2.03							
Beta			U	1.98	pCi/L						
	Uncertainty			+/-2.54							
QC1203074577	346376003	MS									
Alpha		494	5.23	557	pCi/L		112	(75%-125%)		05/07/14	12:15

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1382543										
		Uncertainty									
			+/-1.93	+/-59.5							
Beta	1820	127		2120	pCi/L		106	(75%-125%)	DXG3	05/07/14	12:15
		Uncertainty	+/-3.68	+/-74.6							
QC1203074578	346376003	MSD									
Alpha	494	5.23		616	pCi/L	10.0	124	(0%-20%)		05/06/14	07:21
		Uncertainty	+/-1.93	+/-63.2							
Beta	1820	127		2110	pCi/L	0.543	110	(0%-20%)			
		Uncertainty	+/-3.68	+/-74.6							
Batch	1382544										
QC1203074584	346376023	DUP									
Alpha		U	0.921	U	1.79	pCi/L	N/A		N/A	DXG3	05/05/14 12:57
		Uncertainty	+/-2.55	+/-2.74							
Beta			18.7		19.3	pCi/L	3.04	(0%-20%)			
		Uncertainty	+/-3.40	+/-3.33							
QC1203074587	LCS										
Alpha	123				140	pCi/L		114	(75%-125%)		05/06/14 11:24
		Uncertainty			+/-13.6						
Beta	454				557	pCi/L		123	(75%-125%)		
		Uncertainty			+/-19.4						
QC1203074583	MB										
Alpha			U		1.65	pCi/L					05/05/14 13:04
		Uncertainty			+/-1.94						
Beta			U		2.56	pCi/L					
		Uncertainty			+/-2.69						
QC1203074585	346376023	MS									
Alpha	494	U	0.921		527	pCi/L		107	(75%-125%)		05/06/14 16:15
		Uncertainty	+/-2.55	+/-56.7							
Beta	1820		18.7		2240	pCi/L		123	(75%-125%)		
		Uncertainty	+/-3.40	+/-76.8							
QC1203074586	346376023	MSD									
Alpha	494	U	0.921		526	pCi/L	0.247	106	(0%-20%)		05/06/14 11:24
		Uncertainty	+/-2.55	+/-54.1							
Beta	1820		18.7		2230	pCi/L	0.799	122	(0%-20%)		
		Uncertainty	+/-3.40	+/-77.0							
<b>Rad Liquid Scintillation</b>											
Batch	1379900										
QC1203067686	346376003	DUP									
Technetium-99			299	U	162	pCi/L	0.00	(0% - 100%)	MYM1	04/21/14	12:25
		Uncertainty	+/-109		+/-123						
QC1203067687	LCS										
Technetium-99	4340				4180	pCi/L		96.2	(75%-125%)		04/21/14 12:42
		Uncertainty			+/-239						
QC1203067685	MB										
Technetium-99			U		54.6	pCi/L					04/21/14 12:09
		Uncertainty			+/-117						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1379901										
QC1203067689	346376022	DUP									
Technetium-99			U	50.9	144	pCi/L	95.4	(0% - 100%)	MYM1	04/29/14	12:03
			Uncertainty	+/-82.4	+/-87.2						
QC1203067690	LCS										
Technetium-99			4340	4250	pCi/L		97.7	(75%-125%)		04/29/14	12:19
			Uncertainty	+/-208							
QC1203067688	MB										
Technetium-99			U	-69.4	pCi/L					04/30/14	23:34
			Uncertainty	+/-92.7							
Batch	1382434										
QC1203074276	346376003	DUP									
Technetium-99				299	230	pCi/L	26.3	(0% - 100%)	MYM1	04/29/14	09:47
			Uncertainty	+/-109	+/-106						
QC1203074277	LCS										
Technetium-99			4340	4130	pCi/L		95	(75%-125%)		04/29/14	10:03
			Uncertainty	+/-217							
QC1203074275	MB										
Technetium-99			U	-0.637	pCi/L					04/29/14	09:31
			Uncertainty	+/-100							

### 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 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, or LOD.

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 346376

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

^ 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.



**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 14 May 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	July 14, 2014			Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: Y - N
Facility Name	Westinghouse CNF			Protective Abutment: Y - N	Integrity Satisfactory: Y - N
Well ID #	RV-2			Well Yield: Low - Mod - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	31.25				
Depth To Groundwater (DGW) =	18.06				
Length Of Water Column (LWC) =	13.19				
1 Casing Volume (OCV) = LWC x	0.133	=	2.2	gal.	
3 Casing Volumes =	4.26	gal.	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	(TB) SSB WW GP Other				
Method of Sample Collection	(TB) SSB WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 ft	2.2	4.4	6.6	Well Sample Time: 0946
TIME (24 HOUR SYSTEM)	0928	0932	0935	0938	Remarks:
pH (SU)	4.58	4.65	4.65	4.67	
WATER TEMPERATURE (°C)	28.1	26.9	26.5	26.0	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	367.9	337.7	333.1	335.5	
TURBIDITY	7.58	41.9	52.6	137	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>July 14, 2014</b>	
Field Personnel	<b>BTF</b>		
Facility Name	<b>Westinghouse CNF</b>		
Well ID #	<b>W-26</b>		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	<b>32.00</b>		
Depth To Groundwater (DGW) =	<b>25.72</b>		
Length Of Water Column (LWC) =	<b>6.28</b>		
1 Casing Volume (OCV) = LWC x 0.163	<b>= 1.0</b>		gal.
3 Casing Volumes =	<b>3.0</b>		gal. = Standard Evacuation Volume
Total Volume of Water Removed =			gal.
Method of Well Evacuation	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW GP    Other _____		
Method of Sample Collection	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW GP    Other _____		

**Evacuation and Collection Methods**

TB - Teflon Bailor                      1.5" = 0.092                      5" = 1.02

SSB - Stainless Steel Bailor        2" = 0.163                      6" = 1.47

WW - Well Wizard                    3" = 0.367                      7" = 2.00

GP - Grunfos Pump                   4" = 0.652                      8" = 2.61

### Field Analyses

ST	1.0	2.0	3.6	Well Sample Time:
1011	1013	1015	1017	Remarks:
5.44	6.05	5.40	5.83	
36	28.8	28.6	28.1	
184.5	171.6	172.2	167.9	
23.3	26.9	35.6	23.1	
1	1	1	1	

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH                      \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		July 14, 2014	
Field Personnel	BTF		
Facility Name	Westinghouse CNF		
Well ID #	M-41		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	27.05		
Depth To Groundwater (DGW) =	15.57		
Length Of Water Column (LWC) =	11.48		
1 Casing Volume (OCV) = LWC x	0.83	= 1.9	gal.
3 Casing Volumes =	5.7	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW    GP    Other _____		
Method of Sample Collection	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW    GP    Other _____		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092    5" = 1.02  
 2" = 0.163    6" = 1.47  
 3" = 0.367    7" = 2.00  
 4" = 0.652    8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY	ODOR (SUBJECTIVE)**
1.9	3.8	5.7				
0952	0956	0959	1003			
5.92	6.00	5.75	5.90			
30.5	30.0	29.5	29.1			
562	615	585	566			
16.9	38.0	22.3	31.4			
1	1	1	1			

Well Sample Time:  
1005

Remarks:

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH    \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	July 14, 2014			Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: (Y) - N
Facility Name	Westinghouse CNF			Protective Abutment: (Y) - N	Integrity Satisfactory: (Y) - N
Well ID #	11-48			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	44.06				
Depth To Groundwater (DGW) =	26.78				
Length Of Water Column (LWC) =	17.22				
1 Casing Volume (OCV) = LWC x	0.163 0.652 = 11.2			gal.	
3 Casing Volumes =	33.7			gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	TB	SSB	WW	(GP)	Other
Method of Sample Collection	(TB)	SSB	WW	GP	Other

Evacuation and Collection Methods  
TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

Constants for Casing Diameters  
1.5" = 0.092  
2" = 0.163  
3" = 0.367  
4" = 0.652

5" = 1.02  
6" = 1.47  
7" = 2.00  
8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY	ODOR (SUBJECTIVE)**
1st	11.2	15				
1033	1037	1046				
5.84	5.72	5.79				
29.7	29.4	28.6				
133.5	127.9	127.9				
37	28.4	22.2				
1	1	1				

Well Sample Time: 1045  
Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PG14018  
Date Completed: 07/31/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* PG14018 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	07/14/2014 0940	07/14/2014
002	W-26	Aqueous	07/14/2014 1020	07/14/2014
003	MW-41	Aqueous	07/14/2014 1005	07/14/2014
004	W-48	Aqueous	07/14/2014 1045	07/14/2014

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	120		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	5.7		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	150		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	22		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.2		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	22

(6 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-001		
Description: RW-2			Matrix: Aqueous		
Date Sampled: 07/14/2014 0940			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 0938	BTF		
1		(Specific Con) 120.1	1	07/14/2014 0938	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 0938	BTF		
1		(Water level )	1	07/14/2014 0938	BTF		
1		(Well Depth)	1	07/14/2014 0938	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.67			su	1
Specific Conductance @ 25° C - Field		120.1	336		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	26.0			° C	1
Water level depth from top of casing		No Method	18.06			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2235	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2235	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.7		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1501	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1501	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		72	41-144
2-Fluorobiphenyl		91	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		97	38-127
Phenol-d5		99	28-128
Terphenyl-d14		72	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-002		
Description: W-26			Matrix: Aqueous		
Date Sampled: 07/14/2014 1020			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1017	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1017	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1017	BTF		
1		(Water level )	1	07/14/2014 1017	BTF		
1		(Well Depth)	1	07/14/2014 1017	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.83			su	1
Specific Conductance @ 25° C - Field		120.1	168		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	28.1			° C	1
Water level depth from top of casing		No Method	25.72			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2014 2212	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2014 2212	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1614	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1614	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		75	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		90	24-127
Nitrobenzene-d5		97	38-127
Phenol-d5		97	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-003		
Description: MW-41			Matrix: Aqueous		
Date Sampled: 07/14/2014 1005			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1003	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1003	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1003	BTF		
1		(Water level )	1	07/14/2014 1003	BTF		
1		(Well Depth)	1	07/14/2014 1003	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.9			su	1
Specific Conductance @ 25° C - Field		120.1	566		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	29.1			° C	1
Water level depth from top of casing		No Method	15.57			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2257	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2257	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	150		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	22		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1638	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1638	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		71	41-144
2-Fluorobiphenyl		94	37-129
2-Fluorophenol		94	24-127
Nitrobenzene-d5		101	38-127
Phenol-d5		99	28-128
Terphenyl-d14		92	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-004		
Description: W-48			Matrix: Aqueous		
Date Sampled: 07/14/2014 1045			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1040	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1040	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1040	BTF		
1		(Water level )	1	07/14/2014 1040	BTF		
1		(Well Depth)	1	07/14/2014 1040	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.79			su	1
Specific Conductance @ 25° C - Field		120.1	128		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	28.6			° C	1
Water level depth from top of casing		No Method	26.78			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2320	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.2		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2320	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1702	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
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Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
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Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1702	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		68	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		91	24-127
Nitrobenzene-d5		101	38-127
Phenol-d5		93	28-128
Terphenyl-d14		102	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Shealy Environmental Services, Inc.**  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9701  
[www.shealyweb.com](http://www.shealyweb.com)

Number 05389

Level 1 Report v2.1



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 14

Page 1 of 1  
Replaces Date: 09/26/13  
Effective Date: 03/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: CMT 7/14/14 Lot #: B314018

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>87.0 / 4.0 / 4.1</u> °C    /    /    °C    /    /    °C    /    /    °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles    IR Gun ID: #3    IR Gun Correction Factor: <u>±0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of >2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CMT</u> Verified by: _____ Date: <u>7/14/14</u>		

Comments:





August 20, 2014

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

Re: Environmental 2014 - PO 4500633068  
Work Order: 352805

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 16, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
 REVISION: 8  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06-10-13

352805

VENDOR: General Engineering Laboratories (GEL)Month: JulyYear: 2014

From: Westinghouse Electric Company  
 5801 Bluff Rd  
 Hopkins, S.C. 29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/14/14 09:40	1000	X	X	X		X	REC
WELL	#3A	7/10/14 09:46	1000	X	X	X		X	REC
WELL	#7	7/7/14 11:55	1000	X	X	X		X	REC
WELL	#10	7/7/14 14:08	1000	X	X	X		X	REC
WELL	#13R	7/7/14 11:32	1000	X	X	X		X	REC
WELL	#14	7/8/14 09:42	1000	X	X	X		X	REC
WELL	#15	7/8/14 10:18	1000	X	X	X		X	REC
WELL	#16	7/8/14 10:00	1000	X	X	X		X	REC
WELL	#17	7/10/14 11:00	1000	X	X	X		X	REC
WELL	#18	7/7/14 10:28	1000	X	X	X		X	REC
WELL	#20	7/10/14 10:25	1000	X	X	X		X	REC
WELL	#22	7/7/14 10:10	1000	X	X	X		X	REC
WELL	#23R	7/8/14 09:18	1000	X	X	X		X	REC
WELL	#24	7/8/14 08:48	1000	X	X	X		X	REC
WELL	#26	7/14/14 10:20	1000	X	X	X		X	REC
WELL	#27	7/10/14 10:04	1000	X	X	X		X	REC
WELL	#28	7/7/14 11:02	1000	X	X	X		X	REC
WELL	#29	7/7/14 09:28	1000	X	X	X		X	REC
WELL	#30	7/7/14 09:50	1000	X	X	X		X	REC
WELL	#32	7/7/14 14:26	1000	X	X	X		X	REC
WELL	#33	7/8/14 11:02	1000	X	X	X		X	REC
WELL	#38	7/7/14 08:25	1000	X	X	X		X	REC
WELL	#39	7/10/14 11:24	1000	X	X	X		X	REC
WELL	#41R	7/14/14 10:05	1000	X	X	X		X	REC
WELL	#43	7/10/14 11:45	1000	X	X	X		X	REC

Please email crewsrc@westinghouse.com when shipment is received

Technician: Randy CrewsDate Shipped: 7/16/14

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>			SDG/AR/COC/Work Order: <u>352805</u>		
Received By: <u>[Signature]</u>			Date Received: <u>7-16-14</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>		
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?		
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>			
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.		
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>			

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>24°C</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>Vol 7-16-14</u> <u>7.4</u> If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <u>Courier</u> Other

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 352805 GEL Work Order: 352805

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 352805001  
Matrix: Ground Water  
Collect Date: 14-JUL-14 09:40  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.29	+/-20.9	38.3		pCi/L		MJH1	08/01/14	1146 1405429	1
Americium-241	U	0.613	+/-26.0	47.5		pCi/L					
Antimony-124	U	7.50	+/-11.5	25.6		pCi/L					
Antimony-125	U	3.72	+/-13.5	24.3		pCi/L					
Barium-133	U	1.41	+/-6.10	9.79		pCi/L					
Barium-140	U	-17.8	+/-16.1	25.5		pCi/L					
Beryllium-7	U	-0.334	+/-43.5	76.7		pCi/L					
Bismuth-212	U	7.60	+/-64.0	118		pCi/L					
Bismuth-214	U	-9.48	+/-12.2	19.8		pCi/L					
Cerium-139	U	1.22	+/-4.23	6.66		pCi/L					
Cerium-141	U	-4.21	+/-9.06	15.3		pCi/L					
Cerium-144	U	24.2	+/-30.2	45.6		pCi/L					
Cesium-134	U	-1.86	+/-5.95	8.86		pCi/L					
Cesium-136	U	2.37	+/-14.1	27.3		pCi/L					
Cesium-137	U	4.42	+/-5.86	4.68	10.0	pCi/L					
Chromium-51	U	19.4	+/-60.0	97.4		pCi/L					
Cobalt-56	U	0.985	+/-5.27	9.77		pCi/L					
Cobalt-57	U	-4.66	+/-3.82	5.75		pCi/L					
Cobalt-58	U	0.235	+/-5.29	9.67		pCi/L					
Cobalt-60	U	-0.16	+/-5.73	10.6		pCi/L					
Europium-152	U	13.7	+/-18.2	23.5		pCi/L					
Europium-154	U	-7.72	+/-14.8	25.6		pCi/L					
Europium-155	U	-3.63	+/-14.5	25.2		pCi/L					
Iridium-192	U	7.43	+/-6.76	9.41		pCi/L					
Iron-59	U	-10.3	+/-11.1	18.3		pCi/L					
Lead-210	U	-288	+/-1000	1520		pCi/L					
Lead-212	U	11.5	+/-13.5	16.8		pCi/L					
Lead-214	U	12.6	+/-16.1	19.8		pCi/L					
Manganese-54	U	-0.952	+/-4.28	7.61		pCi/L					
Mercury-203	U	1.69	+/-5.40	9.88		pCi/L					
Neodymium-147	U	20.0	+/-81.4	155		pCi/L					
Neptunium-239	U	7.77	+/-36.3	64.4		pCi/L					
Niobium-94	U	0.283	+/-4.65	8.48		pCi/L					
Niobium-95	UI	0.00	+/-5.18	6.65		pCi/L					
Potassium-40	U	-35.3	+/-70.7	142		pCi/L					
Promethium-144	U	-1.72	+/-6.08	9.14		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 352805001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.01	+/-6.14	11.2	pCi/L
Radium-228	U	-1.29	+/-20.9	38.3	pCi/L
Ruthenium-106	U	-21.4	+/-43.2	75.4	pCi/L
Silver-110m	U	6.18	+/-4.88	8.16	pCi/L
Sodium-22	U	-2.81	+/-5.22	9.00	pCi/L
Thallium-208	U	4.34	+/-8.29	8.79	pCi/L
Thorium-230	U	-1210	+/-1770	2830	pCi/L
Thorium-234	U	-315	+/-284	483	pCi/L
Tin-113	U	-1.31	+/-6.78	11.8	pCi/L
Uranium-235	U	-25.7	+/-31.2	49.9	pCi/L
Uranium-238	U	-315	+/-284	483	pCi/L
Yttrium-88	U	-0.238	+/-6.27	12.1	pCi/L
Zinc-65	U	-10.9	+/-10.6	17.2	pCi/L
Zirconium-95	U	7.42	+/-10.8	18.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.09	+/-3.04	3.93	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	14.1	+/-3.55	3.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.0	+/-92.4	156	300	pCi/L	MYM1	08/10/14	0840	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	352805002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 09:46		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.873	+/-21.4	33.8		pCi/L		MJH1	08/01/14	1146 1405429	1
Americium-241	U	-25.3	+/-38.2	66.4		pCi/L					
Antimony-124	U	2.54	+/-12.6	26.7		pCi/L					
Antimony-125	U	1.59	+/-12.3	22.7		pCi/L					
Barium-133	U	-2.18	+/-5.53	9.81		pCi/L					
Barium-140	U	1.62	+/-17.5	35.7		pCi/L					
Beryllium-7	U	18.4	+/-45.3	86.5		pCi/L					
Bismuth-212	U	45.3	+/-76.3	132		pCi/L					
Bismuth-214	U	3.48	+/-11.4	20.5		pCi/L					
Cerium-139	U	3.57	+/-4.21	7.78		pCi/L					
Cerium-141	U	1.70	+/-10.6	17.5		pCi/L					
Cerium-144	U	10.1	+/-26.9	48.7		pCi/L					
Cesium-134	U	1.28	+/-3.90	8.00		pCi/L					
Cesium-136	U	5.89	+/-19.0	37.6		pCi/L					
Cesium-137	U	2.38	+/-3.73	7.62	10.0	pCi/L					
Chromium-51	U	14.1	+/-59.0	110		pCi/L					
Cobalt-56	U	-1.75	+/-4.99	9.14		pCi/L					
Cobalt-57	U	-1.18	+/-3.42	5.93		pCi/L					
Cobalt-58	U	-3.84	+/-5.20	7.30		pCi/L					
Cobalt-60	U	-1.99	+/-11.0	9.95		pCi/L					
Europium-152	U	2.92	+/-13.3	24.8		pCi/L					
Europium-154	U	4.54	+/-16.0	28.1		pCi/L					
Europium-155	U	5.17	+/-14.4	26.3		pCi/L					
Iridium-192	U	2.83	+/-5.33	10.1		pCi/L					
Iron-59	U	-9.05	+/-14.8	20.8		pCi/L					
Lead-210	U	-1280	+/-2040	3180		pCi/L					
Lead-212	U	14.1	+/-16.0	17.0		pCi/L					
Lead-214	U	-4.2	+/-11.3	18.8		pCi/L					
Manganese-54	U	6.74	+/-4.22	8.19		pCi/L					
Mercury-203	U	-3.37	+/-5.57	9.78		pCi/L					
Neodymium-147	U	-76.8	+/-109	184		pCi/L					
Neptunium-239	U	-3.88	+/-36.7	64.7		pCi/L					
Niobium-94	U	1.73	+/-3.92	7.60		pCi/L					
Niobium-95	U	-0.333	+/-5.51	9.96		pCi/L					
Potassium-40	U	14.1	+/-61.5	127		pCi/L					
Promethium-144	U	-0.592	+/-4.72	8.42		pCi/L					



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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 352805002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.175	+/-5.65	10.3	pCi/L
Radium-228	U	0.873	+/-21.4	33.8	pCi/L
Ruthenium-106	U	-41.4	+/-43.5	70.2	pCi/L
Silver-110m	U	-3.4	+/-3.86	6.24	pCi/L
Sodium-22	U	1.61	+/-5.66	9.95	pCi/L
Thallium-208	U	4.38	+/-6.70	8.14	pCi/L
Thorium-230	U	792	+/-1920	3580	pCi/L
Thorium-234	U	-126	+/-328	516	pCi/L
Tin-113	U	0.199	+/-7.38	11.6	pCi/L
Uranium-235	U	9.21	+/-30.5	48.2	pCi/L
Uranium-238	U	-126	+/-328	516	pCi/L
Yttrium-88	U	1.68	+/-4.88	10.9	pCi/L
Zinc-65	U	7.84	+/-6.52	17.1	pCi/L
Zirconium-95	U	-3.72	+/-9.58	16.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.16	+/-1.52	2.48	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	1.15	+/-1.91	3.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-18.1	+/-84.4	150	300	pCi/L	MYM1	08/10/14	0856	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	352805003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 11:55		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.453	+/-27.6	31.1		pCi/L		MJH1	08/01/14	1147 1405429	1
Americium-241	U	-3.75	+/-13.7	21.1		pCi/L					
Antimony-124	U	-4.0	+/-14.2	25.9		pCi/L					
Antimony-125	U	1.75	+/-11.0	20.6		pCi/L					
Barium-133	U	-2.09	+/-6.69	9.97		pCi/L					
Barium-140	U	-16.5	+/-23.5	31.4		pCi/L					
Beryllium-7	U	7.22	+/-49.3	90.7		pCi/L					
Bismuth-212	U	25.5	+/-70.3	124		pCi/L					
Bismuth-214	U	11.4	+/-11.7	15.8		pCi/L					
Cerium-139	U	1.62	+/-3.66	6.75		pCi/L					
Cerium-141	U	7.47	+/-11.9	16.9		pCi/L					
Cerium-144	U	0.987	+/-24.1	41.0		pCi/L					
Cesium-134	U	1.12	+/-5.53	9.24		pCi/L					
Cesium-136	U	-4.62	+/-20.8	37.6		pCi/L					
Cesium-137	U	4.30	+/-5.23	6.99	10.0	pCi/L					
Chromium-51	U	19.4	+/-60.7	109		pCi/L					
Cobalt-56	U	3.15	+/-5.47	10.8		pCi/L					
Cobalt-57	U	0.499	+/-3.25	5.58		pCi/L					
Cobalt-58	U	0.824	+/-4.93	9.46		pCi/L					
Cobalt-60	U	2.95	+/-4.53	9.53		pCi/L					
Europium-152	U	-6.25	+/-13.0	21.8		pCi/L					
Europium-154	U	-5.74	+/-15.4	23.4		pCi/L					
Europium-155	U	16.1	+/-11.6	21.7		pCi/L					
Iridium-192	U	-2.87	+/-4.68	7.83		pCi/L					
Iron-59	U	-8.3	+/-11.4	19.1		pCi/L					
Lead-210	U	169	+/-379	372		pCi/L					
Lead-212	U	1.46	+/-11.2	12.0		pCi/L					
Lead-214	U	-5.64	+/-11.3	17.6		pCi/L					
Manganese-54	U	0.0308	+/-4.16	7.84		pCi/L					
Mercury-203	U	3.29	+/-5.80	10.6		pCi/L					
Neodymium-147	U	-67.5	+/-122	210		pCi/L					
Neptunium-239	U	14.5	+/-35.4	55.7		pCi/L					
Niobium-94	U	4.33	+/-4.47	8.72		pCi/L					
Niobium-95	U	4.49	+/-5.14	10.5		pCi/L					
Potassium-40	U	43.5	+/-74.9	70.7		pCi/L					
Promethium-144	U	-0.192	+/-4.75	8.43		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7 Project: WNUC00127  
Sample ID: 352805003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.58	+/-6.21	10.4	pCi/L
Radium-228	U	0.453	+/-27.6	31.1	pCi/L
Ruthenium-106	U	-20.6	+/-39.8	68.2	pCi/L
Silver-110m	U	0.735	+/-4.31	7.04	pCi/L
Sodium-22	U	-2.04	+/-5.46	8.31	pCi/L
Thallium-208	U	-1.26	+/-5.65	9.62	pCi/L
Thorium-230	U	769	+/-1160	1730	pCi/L
Thorium-234	U	93.7	+/-161	201	pCi/L
Tin-113	U	0.788	+/-5.65	10.5	pCi/L
Uranium-235	U	19.3	+/-30.8	40.8	pCi/L
Uranium-238	U	93.7	+/-161	201	pCi/L
Yttrium-88	U	-0.488	+/-5.69	11.2	pCi/L
Zinc-65	U	4.04	+/-10.1	19.6	pCi/L
Zirconium-95	U	-0.679	+/-8.46	16.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.58	+/-4.70	4.86	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	147	+/-6.68	3.00	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	239	+/-97.9	152	300	pCi/L	MYM1	08/10/14	0912	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10  
Sample ID: 352805004  
Matrix: Ground Water  
Collect Date: 07-JUL-14 14:08  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.99	+/-19.9	37.4		pCi/L		MJH1	08/01/14	1148 1405429	1
Americium-241	U	-27.7	+/-34.8	50.2		pCi/L					
Antimony-124	U	-12.4	+/-13.7	22.1		pCi/L					
Antimony-125	U	-1.57	+/-14.3	23.4		pCi/L					
Barium-133	U	0.398	+/-6.75	10.4		pCi/L					
Barium-140	U	0.513	+/-17.9	36.4		pCi/L					
Beryllium-7	U	14.6	+/-46.1	87.9		pCi/L					
Bismuth-212	U	-44.5	+/-79.5	112		pCi/L					
Bismuth-214	U	5.22	+/-14.1	17.5		pCi/L					
Cerium-139	U	-3.07	+/-4.21	7.22		pCi/L					
Cerium-141	U	-3.8	+/-13.1	19.3		pCi/L					
Cerium-144	U	13.9	+/-32.6	53.5		pCi/L					
Cesium-134	U	-0.20	+/-4.80	8.28		pCi/L					
Cesium-136	U	41.8	+/-16.7	45.9		pCi/L					
Cesium-137	U	1.35	+/-4.52	8.59	10.0	pCi/L					
Chromium-51	U	19.1	+/-62.8	114		pCi/L					
Cobalt-56	U	-0.518	+/-5.52	10.4		pCi/L					
Cobalt-57	U	-4.79	+/-3.78	6.37		pCi/L					
Cobalt-58	U	0.506	+/-6.13	10.1		pCi/L					
Cobalt-60	U	0.032	+/-4.93	9.41		pCi/L					
Europium-152	U	-14.4	+/-12.2	19.0		pCi/L					
Europium-154	U	6.40	+/-14.0	28.5		pCi/L					
Europium-155	U	5.68	+/-14.7	25.7		pCi/L					
Iridium-192	U	-1.85	+/-5.19	8.87		pCi/L					
Iron-59	U	-2.39	+/-11.3	21.0		pCi/L					
Lead-210	U	532	+/-1210	1980		pCi/L					
Lead-212	UI	0.00	+/-15.6	18.7		pCi/L					
Lead-214	U	13.2	+/-16.1	21.6		pCi/L					
Manganese-54	U	0.0343	+/-4.34	8.29		pCi/L					
Mercury-203	U	3.72	+/-6.29	11.5		pCi/L					
Neodymium-147	U	-30.8	+/-144	244		pCi/L					
Neptunium-239	U	-58.4	+/-37.6	62.3		pCi/L					
Niobium-94	U	2.56	+/-4.32	8.36		pCi/L					
Niobium-95	U	-6.32	+/-5.99	9.09		pCi/L					
Potassium-40	UI	0.00	+/-67.7	81.6		pCi/L					
Promethium-144	U	-1.69	+/-4.41	7.68		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10 Project: WNUC00127  
Sample ID: 352805004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.37	+/-6.29	10.6	pCi/L
Radium-228	U	5.99	+/-19.9	37.4	pCi/L
Ruthenium-106	U	40.6	+/-44.7	88.6	pCi/L
Silver-110m	U	1.82	+/-4.55	8.70	pCi/L
Sodium-22	U	2.27	+/-4.96	10.1	pCi/L
Thallium-208	U	-3.44	+/-6.38	10.8	pCi/L
Thorium-230	U	-371	+/-2050	3320	pCi/L
Thorium-234	U	30.8	+/-420	415	pCi/L
Tin-113	U	5.13	+/-6.24	12.3	pCi/L
Uranium-235	U	30.9	+/-43.0	47.1	pCi/L
Uranium-238	U	30.8	+/-420	415	pCi/L
Yttrium-88	U	0.0196	+/-6.21	12.3	pCi/L
Zinc-65	U	3.09	+/-11.2	19.4	pCi/L
Zirconium-95	U	-5.41	+/-10.9	18.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.97	+/-3.32	4.81	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		79.2	+/-7.56	3.83	5.00	pCi/L					
Alpha	U	0.450	+/-2.69	4.93	5.00	pCi/L	JXH3	08/12/14	1114	1406420	3
Beta		75.3	+/-6.05	3.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.0	+/-94.4	159	300	pCi/L	MYM1	08/11/14	0811	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 10  
Sample ID: 352805004

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 352805005  
Matrix: Ground Water  
Collect Date: 07-JUL-14 11:32  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.62	+/-16.5	28.7		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	-2.72	+/-26.6	40.8		pCi/L					
Antimony-124	U	-11.6	+/-13.3	21.5		pCi/L					
Antimony-125	U	-2.91	+/-9.26	16.5		pCi/L					
Barium-133	U	-0.639	+/-4.59	8.35		pCi/L					
Barium-140	U	-11.8	+/-19.1	33.1		pCi/L					
Beryllium-7	U	-18.8	+/-36.0	62.2		pCi/L					
Bismuth-212	U	-8.63	+/-54.8	102		pCi/L					
Bismuth-214	U	6.27	+/-10.7	15.0		pCi/L					
Cerium-139	U	1.83	+/-3.63	6.03		pCi/L					
Cerium-141	U	0.0804	+/-9.37	16.6		pCi/L					
Cerium-144	U	4.98	+/-22.6	40.9		pCi/L					
Cesium-134	U	0.928	+/-3.86	7.60		pCi/L					
Cesium-136	U	5.97	+/-17.3	34.4		pCi/L					
Cesium-137	U	0.950	+/-3.84	7.17	10.0	pCi/L					
Chromium-51	U	48.1	+/-57.4	109		pCi/L					
Cobalt-56	U	0.261	+/-4.49	8.55		pCi/L					
Cobalt-57	U	-0.952	+/-2.80	4.93		pCi/L					
Cobalt-58	U	-0.875	+/-3.83	7.15		pCi/L					
Cobalt-60	U	2.96	+/-3.72	7.26		pCi/L					
Europium-152	U	5.54	+/-10.8	20.2		pCi/L					
Europium-154	U	6.72	+/-10.7	23.2		pCi/L					
Europium-155	U	-2.94	+/-12.3	21.8		pCi/L					
Iridium-192	U	-2.95	+/-4.50	7.87		pCi/L					
Iron-59	U	1.39	+/-9.13	17.9		pCi/L					
Lead-210	U	-594	+/-979	1490		pCi/L					
Lead-212	U	-1.71	+/-8.60	13.5		pCi/L					
Lead-214	U	-2.24	+/-9.34	15.7		pCi/L					
Manganese-54	U	3.79	+/-4.08	8.42		pCi/L					
Mercury-203	U	3.79	+/-5.55	9.54		pCi/L					
Neodymium-147	U	-17	+/-109	196		pCi/L					
Neptunium-239	U	-1.87	+/-30.9	55.4		pCi/L					
Niobium-94	U	-1.2	+/-3.62	6.58		pCi/L					
Niobium-95	U	-1.25	+/-5.83	10.4		pCi/L					
Potassium-40	U	5.98	+/-50.1	80.3		pCi/L					
Promethium-144	U	-0.804	+/-3.56	6.60		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 352805005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.39	+/-4.22	7.07	pCi/L
Radium-228	U	-2.62	+/-16.5	28.7	pCi/L
Ruthenium-106	U	25.8	+/-35.8	69.8	pCi/L
Silver-110m	U	0.356	+/-3.77	6.89	pCi/L
Sodium-22	U	1.70	+/-3.92	8.26	pCi/L
Thallium-208	U	-3.18	+/-4.67	7.51	pCi/L
Thorium-230	U	1820	+/-1890	2510	pCi/L
Thorium-234	U	220	+/-307	330	pCi/L
Tin-113	U	-3.29	+/-4.67	8.02	pCi/L
Uranium-235	U	4.54	+/-27.0	45.7	pCi/L
Uranium-238	U	220	+/-307	330	pCi/L
Yttrium-88	U	3.99	+/-6.18	12.3	pCi/L
Zinc-65	U	-2.33	+/-10.2	15.6	pCi/L
Zirconium-95	U	4.15	+/-8.46	16.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.777	+/-2.99	4.83	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta		91.7	+/-8.25	4.96	5.00	pCi/L					
Alpha	U	0.945	+/-2.21	3.31	5.00	pCi/L	JXH3	08/12/14	1114	1406420	3
Beta		97.6	+/-6.52	4.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	193	+/-97.4	155	300	pCi/L	MYM1	08/10/14	0944	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.5	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R  
Sample ID: 352805005

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	352805006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 09:42		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.47	+/-19.5	36.9		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	1.02	+/-24.8	38.1		pCi/L					
Antimony-124	U	0.152	+/-14.2	27.3		pCi/L					
Antimony-125	U	-6.01	+/-12.0	20.8		pCi/L					
Barium-133	U	-3.21	+/-5.90	10.2		pCi/L					
Barium-140	U	-13.2	+/-19.2	32.4		pCi/L					
Beryllium-7	U	37.3	+/-43.6	85.4		pCi/L					
Bismuth-212	U	52.3	+/-61.6	122		pCi/L					
Bismuth-214	U	1.10	+/-10.3	17.8		pCi/L					
Cerium-139	U	2.55	+/-4.15	7.38		pCi/L					
Cerium-141	U	4.67	+/-10.1	17.8		pCi/L					
Cerium-144	U	4.84	+/-28.5	49.4		pCi/L					
Cesium-134	U	0.796	+/-4.59	8.57		pCi/L					
Cesium-136	U	-1.85	+/-20.9	36.4		pCi/L					
Cesium-137	U	-1.91	+/-4.01	6.91	10.0	pCi/L					
Chromium-51	U	-67.7	+/-59.9	99.2		pCi/L					
Cobalt-56	U	5.28	+/-3.45	10.6		pCi/L					
Cobalt-57	U	-4.02	+/-3.79	6.13		pCi/L					
Cobalt-58	U	-1.25	+/-5.00	8.82		pCi/L					
Cobalt-60	U	1.61	+/-4.36	8.90		pCi/L					
Europium-152	U	-2.56	+/-13.7	22.1		pCi/L					
Europium-154	U	16.8	+/-11.7	27.4		pCi/L					
Europium-155	U	-0.137	+/-17.7	26.6		pCi/L					
Iridium-192	U	1.48	+/-5.14	8.37		pCi/L					
Iron-59	U	-18.1	+/-11.6	17.2		pCi/L					
Lead-210	U	366	+/-732	747		pCi/L					
Lead-212	U	-2.06	+/-9.55	15.6		pCi/L					
Lead-214	U	11.9	+/-10.4	20.0		pCi/L					
Manganese-54	U	1.75	+/-4.03	7.63		pCi/L					
Mercury-203	U	1.69	+/-5.96	10.9		pCi/L					
Neodymium-147	U	42.2	+/-123	206		pCi/L					
Neptunium-239	U	0.706	+/-38.4	66.1		pCi/L					
Niobium-94	U	-0.471	+/-4.28	7.61		pCi/L					
Niobium-95	U	0.291	+/-5.21	9.52		pCi/L					
Potassium-40	U	27.8	+/-65.8	130		pCi/L					
Promethium-144	U	-4.18	+/-4.23	6.78		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 14 Project: WNUC00127  
Sample ID: 352805006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.09	+/-5.21	8.94	pCi/L
Radium-228	U	7.47	+/-19.5	36.9	pCi/L
Ruthenium-106	U	-35.6	+/-44.5	73.7	pCi/L
Silver-110m	U	-4.94	+/-4.26	6.66	pCi/L
Sodium-22	U	5.20	+/-4.30	9.71	pCi/L
Thallium-208	U	4.71	+/-5.70	10.6	pCi/L
Thorium-230	U	898	+/-1750	2810	pCi/L
Thorium-234	U	235	+/-268	350	pCi/L
Tin-113	U	-3.45	+/-6.01	10.4	pCi/L
Uranium-235	U	-36	+/-31.5	46.2	pCi/L
Uranium-238	U	235	+/-268	350	pCi/L
Yttrium-88	U	3.75	+/-5.01	11.4	pCi/L
Zinc-65	U	10.6	+/-10.5	20.4	pCi/L
Zirconium-95	U	2.37	+/-8.15	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.31	+/-3.48	4.29	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	6.07	+/-2.82	3.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	46.6	+/-88.9	152	300	pCi/L	MYM1	08/10/14	1000	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	352805007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:18		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.4	+/-17.1	32.1		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	-17.8	+/-12.5	21.0		pCi/L					
Antimony-124	U	9.87	+/-12.1	25.8		pCi/L					
Antimony-125	U	-1.93	+/-10.9	17.0		pCi/L					
Barium-133	U	-1.77	+/-5.15	7.95		pCi/L					
Barium-140	U	1.85	+/-18.7	31.4		pCi/L					
Beryllium-7	U	-4.76	+/-39.6	71.8		pCi/L					
Bismuth-212	U	-8.46	+/-64.1	104		pCi/L					
Bismuth-214	U	0.641	+/-12.7	18.0		pCi/L					
Cerium-139	U	3.24	+/-3.39	6.28		pCi/L					
Cerium-141	U	-4.17	+/-10.3	14.7		pCi/L					
Cerium-144	U	-9.11	+/-23.7	39.5		pCi/L					
Cesium-134	U	-0.593	+/-4.26	7.19		pCi/L					
Cesium-136	U	1.00	+/-14.4	28.0		pCi/L					
Cesium-137	U	1.70	+/-3.97	7.52	10.0	pCi/L					
Chromium-51	U	17.3	+/-51.9	92.6		pCi/L					
Cobalt-56	U	-0.55	+/-4.80	8.56		pCi/L					
Cobalt-57	U	0.0629	+/-2.81	4.99		pCi/L					
Cobalt-58	U	3.52	+/-4.68	8.62		pCi/L					
Cobalt-60	U	0.481	+/-4.69	8.09		pCi/L					
Europium-152	U	-4.13	+/-10.1	17.0		pCi/L					
Europium-154	U	5.35	+/-11.8	23.6		pCi/L					
Europium-155	U	2.58	+/-10.7	19.4		pCi/L					
Iridium-192	U	-3.4	+/-4.32	7.05		pCi/L					
Iron-59	U	-1.41	+/-9.26	17.4		pCi/L					
Lead-210	U	-202	+/-243	360		pCi/L					
Lead-212	U	5.82	+/-11.9	14.1		pCi/L					
Lead-214	U	3.27	+/-12.9	17.4		pCi/L					
Manganese-54	U	1.07	+/-3.84	7.19		pCi/L					
Mercury-203	U	-0.793	+/-4.47	7.71		pCi/L					
Neodymium-147	U	-48.3	+/-133	201		pCi/L					
Neptunium-239	U	-16	+/-28.6	49.3		pCi/L					
Niobium-94	U	-1.91	+/-3.64	6.24		pCi/L					
Niobium-95	U	-3.94	+/-5.41	7.53		pCi/L					
Potassium-40	U	58.4	+/-55.1	83.2		pCi/L					
Promethium-144	U	2.71	+/-3.84	7.41		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 15 Project: WNUC00127  
Sample ID: 352805007 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.3	+/-4.49	8.03	pCi/L
Radium-228	U	20.4	+/-17.1	32.1	pCi/L
Ruthenium-106	U	12.8	+/-34.9	65.8	pCi/L
Silver-110m	U	-2.3	+/-3.84	6.57	pCi/L
Sodium-22	U	1.83	+/-4.16	8.32	pCi/L
Thallium-208	U	1.23	+/-6.42	5.98	pCi/L
Thorium-230	U	-202	+/-914	1630	pCi/L
Thorium-234	U	-30.5	+/-129	226	pCi/L
Tin-113	U	0.835	+/-5.15	9.54	pCi/L
Uranium-235	U	13.2	+/-26.9	38.2	pCi/L
Uranium-238	U	-30.5	+/-129	226	pCi/L
Yttrium-88	U	-2.05	+/-4.11	7.57	pCi/L
Zinc-65	U	4.32	+/-9.67	16.4	pCi/L
Zirconium-95	U	2.17	+/-8.50	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.31	+/-3.68	4.39	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	195	+/-11.8	3.47	5.00	pCi/L					
Alpha	4.04	+/-2.74	2.92	5.00	pCi/L	JXH3	08/12/14	1116	1406420	3
Beta	204	+/-9.81	4.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	306	+/-100	151	300	pCi/L	MYM1	08/10/14	1017	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	352805007	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	352805008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:00		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.28	+/-20.7	32.5		pCi/L		MJH1	08/01/14	1150 1405429	1
Americium-241	U	-0.696	+/-6.45	10.2		pCi/L					
Antimony-124	U	6.68	+/-13.0	25.8		pCi/L					
Antimony-125	U	-1.58	+/-10.5	19.2		pCi/L					
Barium-133	U	0.625	+/-4.61	8.28		pCi/L					
Barium-140	U	-9.21	+/-20.7	36.9		pCi/L					
Beryllium-7	U	30.1	+/-43.5	85.2		pCi/L					
Bismuth-212	U	-39.8	+/-74.0	126		pCi/L					
Bismuth-214	U	12.3	+/-13.9	19.4		pCi/L					
Cerium-139	U	-1.08	+/-3.04	5.42		pCi/L					
Cerium-141	U	3.67	+/-8.04	13.5		pCi/L					
Cerium-144	U	0.258	+/-21.4	34.9		pCi/L					
Cesium-134	U	0.323	+/-4.11	7.99		pCi/L					
Cesium-136	U	-3.96	+/-17.7	32.6		pCi/L					
Cesium-137	U	-1.15	+/-4.92	7.44	10.0	pCi/L					
Chromium-51	U	-33	+/-57.7	96.9		pCi/L					
Cobalt-56	U	3.01	+/-5.51	10.9		pCi/L					
Cobalt-57	U	1.15	+/-2.44	4.37		pCi/L					
Cobalt-58	U	2.15	+/-4.93	9.83		pCi/L					
Cobalt-60	U	-3.66	+/-4.00	6.57		pCi/L					
Europium-152	U	-3.17	+/-12.4	21.4		pCi/L					
Europium-154	U	-8.5	+/-12.8	22.4		pCi/L					
Europium-155	U	1.63	+/-9.40	16.5		pCi/L					
Iridium-192	U	3.06	+/-4.66	8.65		pCi/L					
Iron-59	U	-9.05	+/-13.2	17.8		pCi/L					
Lead-210	U	10.5	+/-101	92.3		pCi/L					
Lead-212	U	-1.15	+/-8.12	13.6		pCi/L					
Lead-214	U	-9.69	+/-11.0	16.3		pCi/L					
Manganese-54	U	0.0719	+/-5.01	8.18		pCi/L					
Mercury-203	U	-1.94	+/-4.87	8.39		pCi/L					
Neodymium-147	U	46.5	+/-121	230		pCi/L					
Neptunium-239	U	2.77	+/-25.3	44.0		pCi/L					
Niobium-94	U	-4.78	+/-4.67	7.43		pCi/L					
Niobium-95	U	-2.47	+/-4.98	8.91		pCi/L					
Potassium-40	U	6.24	+/-76.7	88.3		pCi/L					
Promethium-144	U	2.83	+/-4.94	9.33		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16 Project: WNUC00127  
Sample ID: 352805008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.97	+/-6.08	9.32	pCi/L
Radium-228	U	-4.28	+/-20.7	32.5	pCi/L
Ruthenium-106	U	-1.86	+/-38.5	70.0	pCi/L
Silver-110m	U	0.261	+/-4.10	7.57	pCi/L
Sodium-22	U	-3.1	+/-4.53	7.89	pCi/L
Thallium-208	U	1.62	+/-7.73	7.38	pCi/L
Thorium-230	U	707	+/-683	949	pCi/L
Thorium-234	U	53.6	+/-87.0	94.1	pCi/L
Tin-113	U	-3.78	+/-5.51	9.63	pCi/L
Uranium-235	U	4.34	+/-24.5	34.1	pCi/L
Uranium-238	U	53.6	+/-87.0	94.1	pCi/L
Yttrium-88	U	-3.02	+/-4.97	8.90	pCi/L
Zinc-65	U	-8.9	+/-10.8	16.4	pCi/L
Zirconium-95	U	-5.11	+/-10.8	19.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.41	+/-2.43	4.42	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		12.8	+/-3.27	2.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.28	+/-86.4	153	300	pCi/L	MYM1	08/10/14	1033	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	352805009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:00		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.6	+/-27.2	30.6		pCi/L		MJH1	08/02/14	1032 1405429	1
Americium-241	U	-8.39	+/-22.2	34.0		pCi/L					
Antimony-124	U	-1.13	+/-11.1	21.1		pCi/L					
Antimony-125	U	-2.26	+/-9.28	15.9		pCi/L					
Barium-133	U	-4.9	+/-5.23	7.26		pCi/L					
Barium-140	U	-11.5	+/-20.2	29.2		pCi/L					
Beryllium-7	U	19.3	+/-36.3	68.9		pCi/L					
Bismuth-212	U	-12.2	+/-54.7	90.5		pCi/L					
Bismuth-214	U	6.76	+/-13.7	13.7		pCi/L					
Cerium-139	U	2.56	+/-3.29	6.09		pCi/L					
Cerium-141	U	-0.716	+/-9.49	14.8		pCi/L					
Cerium-144	U	-6.42	+/-23.5	39.2		pCi/L					
Cesium-134	U	-0.37	+/-4.05	7.21		pCi/L					
Cesium-136	U	8.87	+/-16.4	32.1		pCi/L					
Cesium-137	U	1.27	+/-3.44	6.48	10.0	pCi/L					
Chromium-51	U	-2.8	+/-61.1	94.4		pCi/L					
Cobalt-56	U	-2.83	+/-4.37	7.30		pCi/L					
Cobalt-57	U	0.816	+/-2.97	5.10		pCi/L					
Cobalt-58	U	-0.904	+/-4.14	7.29		pCi/L					
Cobalt-60	U	-2.47	+/-3.80	6.44		pCi/L					
Europium-152	U	-5.92	+/-11.0	18.5		pCi/L					
Europium-154	U	6.77	+/-11.8	21.1		pCi/L					
Europium-155	U	-4.76	+/-11.5	19.3		pCi/L					
Iridium-192	U	-1.29	+/-4.46	7.67		pCi/L					
Iron-59	U	1.83	+/-9.52	17.8		pCi/L					
Lead-210	U	-694	+/-751	1020		pCi/L					
Lead-212	U	-5.52	+/-8.02	12.8		pCi/L					
Lead-214	U	9.72	+/-14.5	16.8		pCi/L					
Manganese-54	U	2.70	+/-4.17	7.07		pCi/L					
Mercury-203	U	7.19	+/-4.92	9.28		pCi/L					
Neodymium-147	U	-19.1	+/-108	168		pCi/L					
Neptunium-239	U	45.2	+/-32.2	52.2		pCi/L					
Niobium-94	U	2.38	+/-4.37	7.01		pCi/L					
Niobium-95	U	0.506	+/-4.41	8.02		pCi/L					
Potassium-40	U	3.56	+/-51.9	92.3		pCi/L					
Promethium-144	U	-1.42	+/-3.78	6.56		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	352805009	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.71	+/-4.42	7.62	pCi/L
Radium-228	U	20.6	+/-27.2	30.6	pCi/L
Ruthenium-106	U	3.01	+/-33.1	60.5	pCi/L
Silver-110m	U	-2.19	+/-3.44	5.87	pCi/L
Sodium-22	U	2.34	+/-4.16	7.43	pCi/L
Thallium-208	U	0.983	+/-5.06	8.03	pCi/L
Thorium-230	U	-369	+/-1370	2110	pCi/L
Thorium-234	U	52.1	+/-215	292	pCi/L
Tin-113	U	-2.55	+/-5.18	8.70	pCi/L
Uranium-235	U	1.42	+/-23.5	39.5	pCi/L
Uranium-238	U	52.1	+/-215	292	pCi/L
Yttrium-88	U	2.50	+/-6.19	10.9	pCi/L
Zinc-65	U	-5.65	+/-10.4	11.8	pCi/L
Zirconium-95	U	-3.83	+/-7.51	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.901	+/-1.73	3.94	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		526	+/-18.5	3.51	5.00	pCi/L					
Alpha	U	2.42	+/-2.85	3.51	5.00	pCi/L	JXH3	08/13/14	0735	1406420	3
Beta		515	+/-15.9	3.02	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	799	+/-121	152	300	pCi/L	MYM1	08/10/14	1049	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	352805009	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 10:28		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.54	+/-16.5	28.9		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	8.53	+/-10.7	17.2		pCi/L					
Antimony-124	U	0.266	+/-11.0	20.6		pCi/L					
Antimony-125	U	9.34	+/-8.73	16.8		pCi/L					
Barium-133	U	4.86	+/-5.99	8.19		pCi/L					
Barium-140	U	1.70	+/-14.1	27.2		pCi/L					
Beryllium-7	U	15.8	+/-36.0	66.7		pCi/L					
Bismuth-212	U	-26.5	+/-59.5	84.1		pCi/L					
Bismuth-214		15.1	+/-11.0	11.6		pCi/L					
Cerium-139	U	-2.95	+/-2.86	4.87		pCi/L					
Cerium-141	U	-1.37	+/-6.85	12.2		pCi/L					
Cerium-144	U	6.65	+/-19.0	32.5		pCi/L					
Cesium-134	U	1.06	+/-4.37	7.12		pCi/L					
Cesium-136	U	-1.87	+/-20.9	30.5		pCi/L					
Cesium-137	U	4.55	+/-3.71	7.18	10.0	pCi/L					
Chromium-51	U	-15.2	+/-47.0	79.7		pCi/L					
Cobalt-56	U	-2.24	+/-3.72	6.46		pCi/L					
Cobalt-57	U	0.919	+/-2.46	4.23		pCi/L					
Cobalt-58	U	-3.8	+/-4.02	6.76		pCi/L					
Cobalt-60	U	6.09	+/-4.90	8.68		pCi/L					
Europium-152	U	6.71	+/-9.95	17.3		pCi/L					
Europium-154	U	8.70	+/-10.5	21.2		pCi/L					
Europium-155	U	-11.8	+/-9.44	15.0		pCi/L					
Iridium-192	U	-0.904	+/-3.75	6.41		pCi/L					
Iron-59	U	-10.7	+/-9.92	15.9		pCi/L					
Lead-210	U	153	+/-315	291		pCi/L					
Lead-212	U	3.64	+/-7.52	12.0		pCi/L					
Lead-214	U	7.48	+/-9.02	13.8		pCi/L					
Manganese-54	U	-0.86	+/-3.30	5.92		pCi/L					
Mercury-203	U	2.48	+/-4.39	7.87		pCi/L					
Neodymium-147	U	9.86	+/-105	189		pCi/L					
Neptunium-239	U	-3.2	+/-25.3	42.4		pCi/L					
Niobium-94	U	3.51	+/-3.86	6.45		pCi/L					
Niobium-95	U	0.952	+/-4.71	7.66		pCi/L					
Potassium-40	U	-21.9	+/-50.0	86.5		pCi/L					
Promethium-144	U	0.310	+/-3.59	6.34		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.81	+/-5.27	7.57	pCi/L
Radium-228	U	-1.54	+/-16.5	28.9	pCi/L
Ruthenium-106	U	19.5	+/-32.6	60.4	pCi/L
Silver-110m	U	-2.56	+/-3.58	5.94	pCi/L
Sodium-22	U	3.09	+/-3.72	7.53	pCi/L
Thallium-208	U	1.84	+/-5.09	6.47	pCi/L
Thorium-230	U	-218	+/-894	1360	pCi/L
Thorium-234	U	29.4	+/-186	187	pCi/L
Tin-113	U	-0.257	+/-4.58	8.27	pCi/L
Uranium-235	U	7.80	+/-21.2	32.1	pCi/L
Uranium-238	U	29.4	+/-186	187	pCi/L
Yttrium-88	U	-1.5	+/-4.21	7.74	pCi/L
Zinc-65	U	2.12	+/-8.13	15.0	pCi/L
Zirconium-95	U	6.59	+/-8.79	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	13.2	+/-4.70	5.22	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	151	+/-6.44	4.78	5.00	pCi/L					
Alpha	12.7	+/-4.71	5.85	5.00	pCi/L	JXH3	08/12/14	1126	1406420	3
Beta	156	+/-6.40	4.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	276	+/-99.6	152	300	pCi/L	MYM1	08/10/14	1105	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	352805011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 10:25		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.2	+/-19.0	18.7		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	-18.2	+/-26.8	39.2		pCi/L					
Antimony-124	U	-0.603	+/-11.3	21.2		pCi/L					
Antimony-125	U	2.44	+/-11.9	16.3		pCi/L					
Barium-133	U	-1.34	+/-4.88	7.16		pCi/L					
Barium-140	U	5.76	+/-11.9	25.0		pCi/L					
Beryllium-7	U	-0.433	+/-35.2	63.8		pCi/L					
Bismuth-212	U	50.7	+/-66.8	98.5		pCi/L					
Bismuth-214	U	0.534	+/-9.66	15.1		pCi/L					
Cerium-139	U	-0.143	+/-3.13	5.54		pCi/L					
Cerium-141	U	1.07	+/-9.74	15.1		pCi/L					
Cerium-144	U	-19.7	+/-20.7	35.5		pCi/L					
Cesium-134	U	-3.95	+/-3.97	6.29		pCi/L					
Cesium-136	U	8.51	+/-15.9	27.8		pCi/L					
Cesium-137	U	-1.75	+/-3.25	5.54	10.0	pCi/L					
Chromium-51	U	-23.3	+/-48.2	80.9		pCi/L					
Cobalt-56	U	-4.75	+/-4.11	6.77		pCi/L					
Cobalt-57	U	1.85	+/-2.75	5.09		pCi/L					
Cobalt-58	U	-2.4	+/-4.99	7.80		pCi/L					
Cobalt-60	U	-2.02	+/-3.99	6.84		pCi/L					
Europium-152	U	3.38	+/-12.4	17.9		pCi/L					
Europium-154	U	1.80	+/-10.7	20.2		pCi/L					
Europium-155	U	6.95	+/-12.5	20.6		pCi/L					
Iridium-192	U	-0.427	+/-3.97	6.84		pCi/L					
Iron-59	U	3.74	+/-8.79	17.1		pCi/L					
Lead-210	U	-486	+/-1070	1540		pCi/L					
Lead-212	U	8.34	+/-12.2	10.5		pCi/L					
Lead-214	UI	0.00	+/-13.8	12.2		pCi/L					
Manganese-54	U	0.149	+/-3.64	6.77		pCi/L					
Mercury-203	U	-2.86	+/-4.57	7.65		pCi/L					
Neodymium-147	U	-21.3	+/-94.6	168		pCi/L					
Neptunium-239	U	-3.68	+/-29.0	51.7		pCi/L					
Niobium-94	U	-3.42	+/-3.47	5.60		pCi/L					
Niobium-95	U	1.56	+/-4.71	8.00		pCi/L					
Potassium-40	U	28.2	+/-46.9	76.3		pCi/L					
Promethium-144	U	3.82	+/-3.74	7.18		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 352805011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.21	+/-4.15	7.37	pCi/L
Radium-228	U	10.2	+/-19.0	18.7	pCi/L
Ruthenium-106	U	-31.2	+/-32.2	52.7	pCi/L
Silver-110m	U	2.15	+/-3.20	6.14	pCi/L
Sodium-22	U	0.529	+/-3.76	7.09	pCi/L
Thallium-208	U	-0.796	+/-5.23	8.32	pCi/L
Thorium-230	U	1220	+/-1510	2300	pCi/L
Thorium-234	U	37.7	+/-336	299	pCi/L
Tin-113	U	-2.14	+/-4.91	8.68	pCi/L
Uranium-235	U	-4.04	+/-26.2	40.0	pCi/L
Uranium-238	U	37.7	+/-336	299	pCi/L
Yttrium-88	U	-0.847	+/-4.94	9.12	pCi/L
Zinc-65	U	5.05	+/-7.76	13.9	pCi/L
Zirconium-95	U	5.06	+/-6.92	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.030	+/-1.89	4.17	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	-0.0188	+/-1.97	3.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	51.5	+/-89.8	153	300	pCi/L	MYM1	08/10/14	1121	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	352805012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 10:10		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.721	+/-13.8	21.9		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	-5.58	+/-21.5	32.1		pCi/L					
Antimony-124	U	1.32	+/-8.99	17.6		pCi/L					
Antimony-125	U	-0.789	+/-7.57	13.5		pCi/L					
Barium-133	U	-1.26	+/-4.02	6.23		pCi/L					
Barium-140	U	-10.9	+/-14.5	23.6		pCi/L					
Beryllium-7	U	18.8	+/-32.3	60.3		pCi/L					
Bismuth-212	U	17.6	+/-40.0	77.0		pCi/L					
Bismuth-214	U	-6.39	+/-8.75	12.7		pCi/L					
Cerium-139	U	-0.223	+/-3.70	4.53		pCi/L					
Cerium-141	U	-7.17	+/-7.70	11.3		pCi/L					
Cerium-144	U	-5.91	+/-17.6	30.6		pCi/L					
Cesium-134	U	2.38	+/-3.57	5.91		pCi/L					
Cesium-136	U	-1.75	+/-15.3	27.7		pCi/L					
Cesium-137	U	3.56	+/-4.30	5.21	10.0	pCi/L					
Chromium-51	U	-9.66	+/-39.7	71.2		pCi/L					
Cobalt-56	U	0.642	+/-3.72	6.94		pCi/L					
Cobalt-57	U	-1.28	+/-2.28	3.93		pCi/L					
Cobalt-58	U	0.0521	+/-3.19	5.96		pCi/L					
Cobalt-60	U	0.995	+/-3.12	6.19		pCi/L					
Europium-152	U	-3.43	+/-7.87	13.9		pCi/L					
Europium-154	U	11.6	+/-8.05	17.4		pCi/L					
Europium-155	U	2.89	+/-8.86	16.2		pCi/L					
Iridium-192	U	1.18	+/-3.14	5.85		pCi/L					
Iron-59	U	-3.6	+/-8.40	14.5		pCi/L					
Lead-210	U	-5.72	+/-831	1230		pCi/L					
Lead-212	U	4.38	+/-7.69	10.7		pCi/L					
Lead-214	U	9.44	+/-9.65	13.3		pCi/L					
Manganese-54	U	-1.62	+/-2.98	5.19		pCi/L					
Mercury-203	U	2.35	+/-4.58	7.20		pCi/L					
Neodymium-147	U	-72.9	+/-84.9	139		pCi/L					
Neptunium-239	U	-14	+/-23.3	38.2		pCi/L					
Niobium-94	U	-1.66	+/-2.70	4.73		pCi/L					
Niobium-95	U	-0.984	+/-4.67	7.53		pCi/L					
Potassium-40	U	64.1	+/-40.0	65.4		pCi/L					
Promethium-144	U	2.08	+/-2.96	5.77		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22  
Sample ID: 352805012

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.92	+/-3.45	5.93	pCi/L
Radium-228	U	-0.721	+/-13.8	21.9	pCi/L
Ruthenium-106	U	-16.3	+/-29.0	48.4	pCi/L
Silver-110m	U	2.72	+/-3.74	5.04	pCi/L
Sodium-22	U	3.35	+/-3.04	6.16	pCi/L
Thallium-208		6.94	+/-4.66	5.52	pCi/L
Thorium-230	U	-138	+/-1200	1960	pCi/L
Thorium-234	U	128	+/-265	320	pCi/L
Tin-113	U	1.23	+/-4.17	6.86	pCi/L
Uranium-235	U	6.30	+/-23.9	32.1	pCi/L
Uranium-238	U	128	+/-265	320	pCi/L
Yttrium-88	U	-4.58	+/-5.27	6.64	pCi/L
Zinc-65	U	-1.99	+/-7.19	12.6	pCi/L
Zirconium-95	U	-3.73	+/-7.30	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		9.60	+/-4.22	3.89	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		59.7	+/-5.56	4.99	5.00	pCi/L					
Alpha	U	2.19	+/-2.96	5.00	5.00	pCi/L	JXH3	08/12/14	1126	1406420	3
Beta		57.8	+/-4.21	2.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-18.9	+/-83.7	149	300	pCi/L	MYM1	08/10/14	1137	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	352805012	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 23R	Project:	WNUC00127
Sample ID:	352805013	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 09:18		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.28	+/-16.6	24.8		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-5.6	+/-20.5	30.5		pCi/L					
Antimony-124	U	13.0	+/-10.9	23.2		pCi/L					
Antimony-125	U	4.71	+/-9.14	16.8		pCi/L					
Barium-133	U	-6.28	+/-4.48	7.32		pCi/L					
Barium-140	U	-5.96	+/-15.9	23.7		pCi/L					
Beryllium-7	U	-5.14	+/-38.1	67.1		pCi/L					
Bismuth-212	U	19.0	+/-45.4	84.0		pCi/L					
Bismuth-214	U	-2.39	+/-8.94	13.9		pCi/L					
Cerium-139	U	2.96	+/-3.42	6.01		pCi/L					
Cerium-141	U	-2.05	+/-9.13	14.1		pCi/L					
Cerium-144	U	-15.2	+/-23.9	38.0		pCi/L					
Cesium-134	U	2.28	+/-3.98	7.40		pCi/L					
Cesium-136	U	-16.1	+/-18.1	26.6		pCi/L					
Cesium-137	U	0.988	+/-3.42	6.23	10.0	pCi/L					
Chromium-51	U	16.7	+/-48.0	87.1		pCi/L					
Cobalt-56	U	0.520	+/-4.46	7.93		pCi/L					
Cobalt-57	U	1.22	+/-2.86	4.95		pCi/L					
Cobalt-58	U	-0.479	+/-4.46	7.79		pCi/L					
Cobalt-60	U	2.68	+/-3.67	7.38		pCi/L					
Europium-152	U	0.317	+/-10.3	18.3		pCi/L					
Europium-154	U	7.12	+/-10.6	21.1		pCi/L					
Europium-155	U	-12.4	+/-11.7	19.1		pCi/L					
Iridium-192	U	3.69	+/-3.77	7.08		pCi/L					
Iron-59	U	1.15	+/-8.78	16.6		pCi/L					
Lead-210	U	511	+/-674	582		pCi/L					
Lead-212	U	9.11	+/-9.42	10.2		pCi/L					
Lead-214	U	9.16	+/-8.17	15.3		pCi/L					
Manganese-54	U	-1.12	+/-3.34	5.74		pCi/L					
Mercury-203	U	-0.993	+/-4.41	7.76		pCi/L					
Neodymium-147	U	40.0	+/-98.6	182		pCi/L					
Neptunium-239	U	37.3	+/-28.8	50.7		pCi/L					
Niobium-94	U	2.52	+/-2.96	5.66		pCi/L					
Niobium-95	U	2.83	+/-4.13	7.45		pCi/L					
Potassium-40	U	-25.7	+/-44.8	72.8		pCi/L					
Promethium-144	U	-0.134	+/-3.42	6.03		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 352805013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.14	+/-5.28	7.93	pCi/L
Radium-228	U	-4.28	+/-16.6	24.8	pCi/L
Ruthenium-106	U	-13.8	+/-32.7	56.0	pCi/L
Silver-110m	U	-3.42	+/-3.48	5.64	pCi/L
Sodium-22	U	2.47	+/-3.76	7.46	pCi/L
Thallium-208	U	0.925	+/-5.19	5.80	pCi/L
Thorium-230	U	1810	+/-1580	1950	pCi/L
Thorium-234	U	148	+/-182	282	pCi/L
Tin-113	U	-0.115	+/-4.88	8.67	pCi/L
Uranium-235	U	2.84	+/-28.1	37.6	pCi/L
Uranium-238	U	148	+/-182	282	pCi/L
Yttrium-88	U	-1.17	+/-4.92	8.84	pCi/L
Zinc-65	U	-0.298	+/-7.83	12.5	pCi/L
Zirconium-95	U	3.54	+/-8.82	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.22	+/-1.88	3.34	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	1.81	+/-2.27	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	22.9	+/-87.0	151	300	pCi/L	MYM1	08/10/14	1154	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	352805014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 08:48		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.496	+/-18.3	27.6		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-28.1	+/-26.3	44.9		pCi/L					
Antimony-124	U	1.01	+/-10.4	19.7		pCi/L					
Antimony-125	U	3.47	+/-9.27	16.6		pCi/L					
Barium-133	U	-5.44	+/-4.63	7.58		pCi/L					
Barium-140	U	2.33	+/-17.3	32.5		pCi/L					
Beryllium-7	U	1.41	+/-42.5	63.5		pCi/L					
Bismuth-212	U	-18.9	+/-54.1	93.5		pCi/L					
Bismuth-214	U	5.56	+/-12.0	15.9		pCi/L					
Cerium-139	U	2.03	+/-3.65	6.37		pCi/L					
Cerium-141	U	7.39	+/-9.34	15.7		pCi/L					
Cerium-144	U	-27.6	+/-26.5	39.3		pCi/L					
Cesium-134	U	-0.935	+/-4.10	7.14		pCi/L					
Cesium-136	U	0.875	+/-18.6	33.8		pCi/L					
Cesium-137	U	2.33	+/-3.54	6.65	10.0	pCi/L					
Chromium-51	U	0.800	+/-52.0	91.4		pCi/L					
Cobalt-56	U	-2.04	+/-4.63	7.88		pCi/L					
Cobalt-57	U	1.25	+/-3.09	5.44		pCi/L					
Cobalt-58	U	-1.55	+/-4.08	7.02		pCi/L					
Cobalt-60	U	0.127	+/-4.95	7.57		pCi/L					
Europium-152	U	-2.6	+/-10.5	18.1		pCi/L					
Europium-154	U	6.48	+/-10.5	20.4		pCi/L					
Europium-155	U	-0.546	+/-12.6	21.9		pCi/L					
Iridium-192	U	0.0252	+/-4.14	7.27		pCi/L					
Iron-59	U	1.96	+/-9.35	17.4		pCi/L					
Lead-210	U	-670	+/-976	1510		pCi/L					
Lead-212	U	-6.2	+/-8.97	12.7		pCi/L					
Lead-214	U	-11.7	+/-10.1	14.3		pCi/L					
Manganese-54	U	0.343	+/-4.10	7.25		pCi/L					
Mercury-203	U	2.75	+/-4.91	8.86		pCi/L					
Neodymium-147	U	-22.4	+/-102	181		pCi/L					
Neptunium-239	U	-11.1	+/-37.1	54.8		pCi/L					
Niobium-94	U	3.57	+/-3.42	6.51		pCi/L					
Niobium-95	U	5.77	+/-4.43	8.64		pCi/L					
Potassium-40	U	-22.4	+/-48.0	80.0		pCi/L					
Promethium-144	U	1.35	+/-3.45	6.32		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24 Project: WNUC00127  
Sample ID: 352805014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.98	+/-4.40	8.11	pCi/L
Radium-228	U	0.496	+/-18.3	27.6	pCi/L
Ruthenium-106	U	3.93	+/-34.2	61.5	pCi/L
Silver-110m	U	-1.05	+/-3.79	6.20	pCi/L
Sodium-22	U	2.84	+/-3.69	7.27	pCi/L
Thallium-208	U	2.34	+/-4.15	5.75	pCi/L
Thorium-230	U	-2070	+/-1510	2540	pCi/L
Thorium-234	U	-138	+/-226	357	pCi/L
Tin-113	U	-2.68	+/-4.72	7.98	pCi/L
Uranium-235	U	-18.8	+/-29.0	39.4	pCi/L
Uranium-238	U	-138	+/-226	357	pCi/L
Yttrium-88	U	6.26	+/-5.03	10.6	pCi/L
Zinc-65	U	-0.0058	+/-7.35	13.4	pCi/L
Zirconium-95	U	5.43	+/-7.48	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.18	+/-1.73	3.01	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	0.0953	+/-1.92	3.68	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	38.5	+/-91.5	157	300	pCi/L	MYM1	08/10/14	1210	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.9	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	352805015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JUL-14 10:20		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	15.4	+/-15.1	29.5		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-29.3	+/-17.7	29.4		pCi/L					
Antimony-124	U	-2.8	+/-9.09	16.7		pCi/L					
Antimony-125	U	0.0629	+/-9.81	17.5		pCi/L					
Barium-133	U	-1.17	+/-5.13	7.85		pCi/L					
Barium-140	U	0.179	+/-10.7	20.3		pCi/L					
Beryllium-7	U	-0.837	+/-34.9	62.0		pCi/L					
Bismuth-212	U	63.3	+/-51.6	109		pCi/L					
Bismuth-214	U	-4.35	+/-9.55	15.1		pCi/L					
Cerium-139	U	0.592	+/-3.70	5.66		pCi/L					
Cerium-141	U	-1.03	+/-7.33	12.7		pCi/L					
Cerium-144	U	0.941	+/-21.8	38.1		pCi/L					
Cesium-134	U	0.800	+/-3.85	7.20		pCi/L					
Cesium-136	U	-1.34	+/-11.1	18.1		pCi/L					
Cesium-137	U	6.00	+/-3.73	7.37	10.0	pCi/L					
Chromium-51	U	21.4	+/-45.2	82.7		pCi/L					
Cobalt-56	U	2.27	+/-4.33	8.20		pCi/L					
Cobalt-57	U	-1.84	+/-2.79	4.74		pCi/L					
Cobalt-58	U	0.359	+/-4.10	7.57		pCi/L					
Cobalt-60	U	1.20	+/-3.41	6.56		pCi/L					
Europium-152	U	0.658	+/-11.1	19.5		pCi/L					
Europium-154	U	-2.52	+/-9.23	16.5		pCi/L					
Europium-155	U	-8.29	+/-11.5	19.7		pCi/L					
Iridium-192	U	1.05	+/-4.13	7.48		pCi/L					
Iron-59	U	-1.83	+/-8.18	14.7		pCi/L					
Lead-210	U	417	+/-762	794		pCi/L					
Lead-212	U	3.44	+/-10.1	12.2		pCi/L					
Lead-214	U	8.84	+/-12.7	15.0		pCi/L					
Manganese-54	U	4.21	+/-2.85	6.82		pCi/L					
Mercury-203	U	3.53	+/-6.46	7.86		pCi/L					
Neodymium-147	U	18.7	+/-76.8	138		pCi/L					
Neptunium-239	U	6.89	+/-31.2	51.1		pCi/L					
Niobium-94	U	-0.249	+/-3.88	6.74		pCi/L					
Niobium-95	U	-2.29	+/-4.43	7.42		pCi/L					
Potassium-40	U	7.88	+/-48.5	85.1		pCi/L					
Promethium-144	U	3.18	+/-3.92	7.23		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 26 Project: WNUC00127  
Sample ID: 352805015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.57	+/-4.43	8.06	pCi/L
Radium-228	U	15.4	+/-15.1	29.5	pCi/L
Ruthenium-106	U	2.47	+/-31.4	56.0	pCi/L
Silver-110m	U	0.579	+/-3.62	6.47	pCi/L
Sodium-22	U	-0.438	+/-3.20	5.83	pCi/L
Thallium-208	U	3.38	+/-4.24	6.51	pCi/L
Thorium-230	U	785	+/-1570	2070	pCi/L
Thorium-234	U	44.7	+/-190	276	pCi/L
Tin-113	U	-5.97	+/-5.74	8.34	pCi/L
Uranium-235	U	-14.7	+/-25.7	37.8	pCi/L
Uranium-238	U	44.7	+/-190	276	pCi/L
Yttrium-88	U	2.27	+/-3.28	7.14	pCi/L
Zinc-65	U	-7.45	+/-7.64	12.6	pCi/L
Zirconium-95	U	-4.05	+/-7.68	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.707	+/-1.41	2.73	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		7.83	+/-3.35	4.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.2	+/-115	195	300	pCi/L	MYM1	08/10/14	1136	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	352805016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 10:04		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.62	+/-17.5	24.9		pCi/L		MJH1	08/02/14	1035 1405429	1
Americium-241	U	-16.3	+/-9.89	15.9		pCi/L					
Antimony-124	U	3.42	+/-9.23	17.8		pCi/L					
Antimony-125	U	-1.13	+/-7.59	13.6		pCi/L					
Barium-133	U	1.15	+/-3.90	6.31		pCi/L					
Barium-140	U	4.22	+/-11.6	22.2		pCi/L					
Beryllium-7	U	9.27	+/-28.8	53.1		pCi/L					
Bismuth-212	U	14.8	+/-49.8	75.7		pCi/L					
Bismuth-214	U	0.848	+/-12.6	10.5		pCi/L					
Cerium-139	U	-0.27	+/-3.00	4.56		pCi/L					
Cerium-141	U	3.56	+/-7.89	10.8		pCi/L					
Cerium-144	U	10.9	+/-17.0	30.5		pCi/L					
Cesium-134	U	1.24	+/-3.51	5.69		pCi/L					
Cesium-136	U	2.95	+/-12.5	23.6		pCi/L					
Cesium-137	U	-0.967	+/-3.09	5.38	10.0	pCi/L					
Chromium-51	U	15.6	+/-40.6	71.1		pCi/L					
Cobalt-56	U	-3.33	+/-4.63	6.41		pCi/L					
Cobalt-57	U	3.13	+/-2.17	4.03		pCi/L					
Cobalt-58	U	0.876	+/-3.37	5.46		pCi/L					
Cobalt-60	U	-3.22	+/-3.29	5.04		pCi/L					
Europium-152	U	3.02	+/-9.44	14.5		pCi/L					
Europium-154	U	-0.483	+/-9.13	15.6		pCi/L					
Europium-155	U	-6.64	+/-8.56	14.6		pCi/L					
Iridium-192	U	-4.67	+/-3.45	5.44		pCi/L					
Iron-59	U	-1.88	+/-6.62	12.0		pCi/L					
Lead-210	U	75.3	+/-284	253		pCi/L					
Lead-212	U	5.13	+/-8.55	10.2		pCi/L					
Lead-214	U	10.5	+/-9.89	13.1		pCi/L					
Manganese-54	U	-1.34	+/-2.91	4.95		pCi/L					
Mercury-203	UI	0.00	+/-5.52	6.32		pCi/L					
Neodymium-147	U	1.26	+/-73.9	133		pCi/L					
Neptunium-239	U	3.79	+/-21.9	38.8		pCi/L					
Niobium-94	U	0.0836	+/-2.78	4.96		pCi/L					
Niobium-95	U	0.423	+/-4.72	6.59		pCi/L					
Potassium-40	U	-39.3	+/-44.2	70.6		pCi/L					
Promethium-144	U	2.33	+/-2.83	5.36		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	352805016	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.539	+/-3.54	6.45	pCi/L
Radium-228	U	3.62	+/-17.5	24.9	pCi/L
Ruthenium-106	U	16.9	+/-27.0	50.5	pCi/L
Silver-110m	U	0.372	+/-3.04	5.47	pCi/L
Sodium-22	U	-0.171	+/-3.23	5.53	pCi/L
Thallium-208	U	0.477	+/-4.20	5.18	pCi/L
Thorium-230	U	-86.5	+/-740	1310	pCi/L
Thorium-234	U	-145	+/-107	168	pCi/L
Tin-113	U	0.0405	+/-3.84	6.95	pCi/L
Uranium-235	U	9.57	+/-21.2	31.1	pCi/L
Uranium-238	U	-145	+/-107	168	pCi/L
Yttrium-88	U	1.77	+/-3.45	7.15	pCi/L
Zinc-65	U	-5.12	+/-7.57	10.9	pCi/L
Zirconium-95	U	3.18	+/-5.82	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.54	+/-3.28	4.42	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	3.90	+/-2.49	3.68	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	26.8	+/-111	192	300	pCi/L	MYM1	08/10/14	1153	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	352805017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 11:02		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.60	+/-18.1	26.9		pCi/L		MJH1	08/02/14	1035 1405429	1
Americium-241	U	2.21	+/-5.00	8.10		pCi/L					
Antimony-124	U	-1.29	+/-10.2	19.1		pCi/L					
Antimony-125	U	7.49	+/-7.83	15.3		pCi/L					
Barium-133	U	-1.16	+/-3.89	6.60		pCi/L					
Barium-140	U	2.94	+/-14.9	29.3		pCi/L					
Beryllium-7	U	8.13	+/-36.3	66.5		pCi/L					
Bismuth-212	U	-39.6	+/-62.5	98.1		pCi/L					
Bismuth-214		23.3	+/-13.0	10.9		pCi/L					
Cerium-139	U	-1.2	+/-2.51	4.40		pCi/L					
Cerium-141	U	-0.945	+/-6.10	10.9		pCi/L					
Cerium-144	U	-6.62	+/-16.0	26.5		pCi/L					
Cesium-134	U	-0.989	+/-3.58	6.47		pCi/L					
Cesium-136	U	-0.257	+/-21.2	33.1		pCi/L					
Cesium-137	U	0.332	+/-3.53	6.35	10.0	pCi/L					
Chromium-51	U	29.9	+/-46.5	84.1		pCi/L					
Cobalt-56	U	2.69	+/-3.99	7.90		pCi/L					
Cobalt-57	U	0.473	+/-1.98	3.42		pCi/L					
Cobalt-58	U	-1.59	+/-4.40	7.84		pCi/L					
Cobalt-60	U	-2.55	+/-3.59	6.19		pCi/L					
Europium-152	U	-0.93	+/-9.41	16.2		pCi/L					
Europium-154	U	7.30	+/-11.9	20.6		pCi/L					
Europium-155	U	1.83	+/-7.30	12.7		pCi/L					
Iridium-192	U	-1.06	+/-3.57	6.09		pCi/L					
Iron-59	U	4.69	+/-8.54	16.8		pCi/L					
Lead-210	U	44.5	+/-91.3	76.8		pCi/L					
Lead-212	U	6.56	+/-6.80	11.1		pCi/L					
Lead-214	U	-2.89	+/-9.50	13.5		pCi/L					
Manganese-54	U	-2.68	+/-4.24	6.14		pCi/L					
Mercury-203	U	-1.94	+/-3.89	6.60		pCi/L					
Neodymium-147	U	26.2	+/-103	190		pCi/L					
Neptunium-239	U	-1.86	+/-19.8	33.6		pCi/L					
Niobium-94	U	2.53	+/-3.10	5.91		pCi/L					
Niobium-95	U	3.19	+/-4.05	8.01		pCi/L					
Potassium-40	U	4.64	+/-71.8	69.9		pCi/L					
Promethium-144	U	1.02	+/-3.51	6.36		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28 Project: WNUC00127  
Sample ID: 352805017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.06	+/-3.94	7.27	pCi/L
Radium-228	U	3.60	+/-18.1	26.9	pCi/L
Ruthenium-106	U	-4.87	+/-32.8	57.7	pCi/L
Silver-110m	U	0.173	+/-3.42	6.12	pCi/L
Sodium-22	U	-1.42	+/-4.78	7.29	pCi/L
Thallium-208	U	1.69	+/-4.07	6.61	pCi/L
Thorium-230	U	84.0	+/-497	782	pCi/L
Thorium-234	U	41.0	+/-65.9	121	pCi/L
Tin-113	U	-0.512	+/-4.55	8.22	pCi/L
Uranium-235	U	-15.9	+/-20.2	28.8	pCi/L
Uranium-238	U	41.0	+/-65.9	121	pCi/L
Yttrium-88	U	-6.11	+/-4.38	6.50	pCi/L
Zinc-65	U	-5.87	+/-9.74	13.6	pCi/L
Zirconium-95	U	3.52	+/-7.40	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	13.0	+/-4.30	4.48	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	33.2	+/-4.04	4.95	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.4	+/-105	182	300	pCi/L	MYM1	08/10/14	1210	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	352805018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 09:28		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	0.567	+/-15.7	23.4		pCi/L		MJH1	08/02/14	1035	1405429	1
Americium-241	U	-0.00701	+/-9.87	15.5		pCi/L						
Antimony-124	U	-5.75	+/-11.1	15.7		pCi/L						
Antimony-125	U	-0.272	+/-7.58	13.2		pCi/L						
Barium-133	U	-2.12	+/-4.16	6.10		pCi/L						
Barium-140	U	4.67	+/-14.7	27.9		pCi/L						
Beryllium-7	U	3.68	+/-33.8	58.7		pCi/L						
Bismuth-212	U	41.7	+/-42.5	81.6		pCi/L						
Bismuth-214	U	8.90	+/-11.4	10.5		pCi/L						
Cerium-139	U	-0.76	+/-2.79	4.61		pCi/L						
Cerium-141	U	-0.407	+/-9.06	12.0		pCi/L						
Cerium-144	U	-8.22	+/-16.9	27.9		pCi/L						
Cesium-134	U	6.09	+/-3.62	6.62		pCi/L						
Cesium-136	U	-4.0	+/-12.9	23.5		pCi/L						
Cesium-137	U	-0.327	+/-3.04	5.44	10.0	pCi/L						
Chromium-51	U	-7.3	+/-43.1	75.0		pCi/L						
Cobalt-56	U	2.81	+/-3.65	6.92		pCi/L						
Cobalt-57	U	0.838	+/-2.17	3.76		pCi/L						
Cobalt-58	U	0.315	+/-3.72	6.34		pCi/L						
Cobalt-60	U	-3.5	+/-3.06	4.91		pCi/L						
Europium-152	U	-1.9	+/-8.59	14.9		pCi/L						
Europium-154	U	4.60	+/-8.98	17.4		pCi/L						
Europium-155	U	5.74	+/-8.25	14.6		pCi/L						
Iridium-192	U	-0.209	+/-3.40	5.95		pCi/L						
Iron-59	U	5.43	+/-7.73	15.2		pCi/L						
Lead-210	U	147	+/-303	275		pCi/L						
Lead-212	U	6.33	+/-8.41	11.1		pCi/L						
Lead-214	U	4.04	+/-13.1	13.1		pCi/L						
Manganese-54	U	-1.65	+/-3.04	5.18		pCi/L						
Mercury-203	U	-1.26	+/-4.29	6.51		pCi/L						
Neodymium-147	U	29.8	+/-91.7	171		pCi/L						
Neptunium-239	U	-12.8	+/-23.1	38.3		pCi/L						
Niobium-94	U	-1.82	+/-2.73	4.65		pCi/L						
Niobium-95	U	-1.57	+/-3.53	6.10		pCi/L						
Potassium-40	U	42.6	+/-63.4	55.5		pCi/L						
Promethium-144	U	0.974	+/-2.90	5.32		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 29 Project: WNUC00127  
Sample ID: 352805018 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.24	+/-3.62	6.01	pCi/L
Radium-228	U	0.567	+/-15.7	23.4	pCi/L
Ruthenium-106	U	-13.1	+/-27.4	47.9	pCi/L
Silver-110m	U	0.237	+/-2.93	5.33	pCi/L
Sodium-22	U	2.38	+/-3.15	6.24	pCi/L
Thallium-208	U	1.68	+/-3.93	5.42	pCi/L
Thorium-230	U	110	+/-774	1210	pCi/L
Thorium-234	U	33.5	+/-143	143	pCi/L
Tin-113	U	2.38	+/-3.95	7.16	pCi/L
Uranium-235	U	3.18	+/-26.3	27.6	pCi/L
Uranium-238	U	33.5	+/-143	143	pCi/L
Yttrium-88	U	0.0154	+/-3.21	6.16	pCi/L
Zinc-65	U	2.03	+/-6.44	10.9	pCi/L
Zirconium-95	U	2.30	+/-6.33	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	6.11	+/-3.83	4.26	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	10.4	+/-3.39	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	56.1	+/-110	187	300	pCi/L	MYM1	08/10/14	1227	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	352805019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 09:50		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		30.0	+/-2.93	0.571	1.00	pCi/L		HAKB	08/15/14	0954 1411601	1
Uranium-235/236		1.28	+/-0.693	0.273	1.00	pCi/L					
Uranium-238		9.27	+/-1.63	0.354	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.12	+/-16.7	21.2		pCi/L		MJH1	08/02/14	1036 1405429	2
Americium-241	U	5.21	+/-19.1	30.2		pCi/L					
Antimony-124	U	7.18	+/-9.99	18.7		pCi/L					
Antimony-125	U	-7.07	+/-8.53	13.8		pCi/L					
Barium-133	UI	0.00	+/-4.77	6.81		pCi/L					
Barium-140	U	6.85	+/-13.3	27.1		pCi/L					
Beryllium-7	U	25.3	+/-32.7	62.2		pCi/L					
Bismuth-212	U	5.79	+/-40.8	74.1		pCi/L					
Bismuth-214		12.3	+/-11.0	9.71		pCi/L					
Cerium-139	U	0.356	+/-2.70	4.86		pCi/L					
Cerium-141	U	5.37	+/-7.90	13.0		pCi/L					
Cerium-144	U	5.38	+/-18.2	33.2		pCi/L					
Cesium-134	U	-2.01	+/-3.41	5.76		pCi/L					
Cesium-136	U	19.5	+/-14.2	28.3		pCi/L					
Cesium-137	U	1.07	+/-4.26	5.52	10.0	pCi/L					
Chromium-51	U	16.2	+/-45.1	80.2		pCi/L					
Cobalt-56	U	-1.93	+/-4.27	6.15		pCi/L					
Cobalt-57	U	1.05	+/-2.52	4.32		pCi/L					
Cobalt-58	U	1.35	+/-3.27	6.14		pCi/L					
Cobalt-60	U	-1.56	+/-2.67	4.60		pCi/L					
Europium-152	U	6.97	+/-8.88	15.2		pCi/L					
Europium-154	U	3.69	+/-9.28	17.9		pCi/L					
Europium-155	U	5.26	+/-10.4	18.0		pCi/L					
Iridium-192	U	-0.806	+/-3.59	6.17		pCi/L					
Iron-59	U	-1.66	+/-8.07	14.6		pCi/L					
Lead-210	U	-915	+/-734	1010		pCi/L					
Lead-212	U	9.79	+/-8.36	11.0		pCi/L					
Lead-214	U	11.7	+/-12.9	13.4		pCi/L					
Manganese-54	U	-3.69	+/-3.10	4.87		pCi/L					
Mercury-203	U	-3.02	+/-4.88	7.12		pCi/L					
Neodymium-147	U	-8.56	+/-86.8	157		pCi/L					



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 352805019

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	6.56	+/-24.7	42.2	pCi/L
Niobium-94	U	2.44	+/-3.09	5.23	pCi/L
Niobium-95	U	0.265	+/-3.65	6.58	pCi/L
Potassium-40	U	5.45	+/-45.8	80.3	pCi/L
Promethium-144	U	3.06	+/-5.51	5.64	pCi/L
Promethium-146	U	-1.58	+/-3.30	5.85	pCi/L
Radium-228	U	6.12	+/-16.7	21.2	pCi/L
Ruthenium-106	U	-22.5	+/-26.4	44.3	pCi/L
Silver-110m	U	4.40	+/-6.10	5.28	pCi/L
Sodium-22	U	1.55	+/-3.27	6.35	pCi/L
Thallium-208	U	3.08	+/-5.01	5.06	pCi/L
Thorium-230	U	1060	+/-1350	1980	pCi/L
Thorium-234	U	118	+/-245	233	pCi/L
Tin-113	U	0.586	+/-4.15	7.26	pCi/L
Uranium-235	U	2.18	+/-24.1	33.0	pCi/L
Uranium-238	U	118	+/-245	233	pCi/L
Yttrium-88	U	0.637	+/-3.60	7.11	pCi/L
Zinc-65	U	-1.87	+/-7.30	11.2	pCi/L
Zirconium-95	U	-1.82	+/-6.01	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	48.1	+/-10.0	4.44	5.00	pCi/L	JXH3	08/12/14	0848	1406421	3
Beta	60.4	+/-6.74	4.10	5.00	pCi/L					
Alpha	44.4	+/-9.82	4.99	5.00	pCi/L	JXH3	08/13/14	1018	1406421	4
Beta	58.1	+/-6.59	3.67	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	133	+/-113	187	300	pCi/L	MYM1	08/10/14	1243	1407037	5
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# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 352805019

Project: WNUC00127  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			97.0	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	352805020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 14:26		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-12.9	+/-13.6	21.2		pCi/L		MJH1	08/02/14	1036 1405429	1
Americium-241	U	-7.92	+/-14.7	25.2		pCi/L					
Antimony-124	U	-4.07	+/-8.45	15.2		pCi/L					
Antimony-125	U	0.395	+/-7.37	13.2		pCi/L					
Barium-133	U	-2.98	+/-4.38	6.76		pCi/L					
Barium-140	U	-4.08	+/-12.8	22.5		pCi/L					
Beryllium-7	U	11.4	+/-30.1	54.9		pCi/L					
Bismuth-212	U	-48.3	+/-44.8	64.0		pCi/L					
Bismuth-214	U	-3.87	+/-8.47	11.6		pCi/L					
Cerium-139	U	0.624	+/-3.12	4.77		pCi/L					
Cerium-141	U	1.45	+/-8.06	12.3		pCi/L					
Cerium-144	U	19.2	+/-24.3	31.8		pCi/L					
Cesium-134	U	0.244	+/-3.68	5.95		pCi/L					
Cesium-136	U	3.82	+/-12.8	24.5		pCi/L					
Cesium-137	U	4.88	+/-3.08	6.06	10.0	pCi/L					
Chromium-51	U	9.92	+/-43.4	78.4		pCi/L					
Cobalt-56	U	1.51	+/-4.71	7.11		pCi/L					
Cobalt-57	U	0.479	+/-2.61	4.03		pCi/L					
Cobalt-58	U	-4.07	+/-3.75	5.18		pCi/L					
Cobalt-60	U	0.332	+/-3.07	5.71		pCi/L					
Europium-152	U	-0.097	+/-8.09	14.5		pCi/L					
Europium-154	U	9.05	+/-8.63	17.6		pCi/L					
Europium-155	U	2.39	+/-9.39	16.4		pCi/L					
Iridium-192	U	-1.34	+/-3.46	6.06		pCi/L					
Iron-59	U	0.187	+/-8.23	15.1		pCi/L					
Lead-210	UI	0.00	+/-606	633		pCi/L					
Lead-212	U	2.69	+/-9.30	10.8		pCi/L					
Lead-214	U	-1.98	+/-8.72	12.5		pCi/L					
Manganese-54	U	-1.73	+/-2.64	4.62		pCi/L					
Mercury-203	U	0.930	+/-4.34	6.96		pCi/L					
Neodymium-147	U	-9.35	+/-99.4	174		pCi/L					
Neptunium-239	U	-0.307	+/-23.6	40.6		pCi/L					
Niobium-94	U	-1.48	+/-2.86	4.77		pCi/L					
Niobium-95	U	4.52	+/-4.71	5.19		pCi/L					
Potassium-40	U	9.82	+/-48.7	46.7		pCi/L					
Promethium-144	U	0.402	+/-3.30	5.10		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 352805020

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.46	+/-3.57	6.16	pCi/L
Radium-228	U	-12.9	+/-13.6	21.2	pCi/L
Ruthenium-106	U	-13.7	+/-27.2	45.9	pCi/L
Silver-110m	U	-2.94	+/-3.23	5.23	pCi/L
Sodium-22	U	2.26	+/-3.14	6.21	pCi/L
Thallium-208	U	0.343	+/-4.96	4.91	pCi/L
Thorium-230	U	-1590	+/-1130	1660	pCi/L
Thorium-234	U	55.5	+/-176	256	pCi/L
Tin-113	U	0.521	+/-3.83	6.90	pCi/L
Uranium-235	U	31.4	+/-29.5	33.5	pCi/L
Uranium-238	U	55.5	+/-176	256	pCi/L
Yttrium-88	U	0.148	+/-3.26	5.64	pCi/L
Zinc-65	U	-0.55	+/-6.75	10.7	pCi/L
Zirconium-95	U	1.52	+/-5.65	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.597	+/-2.82	4.74	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta		253	+/-13.4	4.20	5.00	pCi/L					
Alpha		5.48	+/-4.23	4.73	5.00	pCi/L	JXH3	08/13/14	1021	1406421	3
Beta		235	+/-11.9	3.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	477	+/-128	188	300	pCi/L	MYM1	08/10/14	1300	1407037	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 352805020

Project: WNUC00127  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	352805021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 11:02		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.89	+/-17.4	24.5		pCi/L		MJH1	08/02/14	1038 1405431	1
Americium-241	U	-16.8	+/-19.9	30.5		pCi/L					
Antimony-124	U	-1.5	+/-8.62	16.1		pCi/L					
Antimony-125	U	-5.4	+/-8.49	12.4		pCi/L					
Barium-133	U	0.268	+/-3.79	6.09		pCi/L					
Barium-140	U	4.10	+/-15.3	26.6		pCi/L					
Beryllium-7	U	16.1	+/-29.8	55.8		pCi/L					
Bismuth-212	U	3.09	+/-47.8	69.9		pCi/L					
Bismuth-214	U	1.11	+/-9.72	9.78		pCi/L					
Cerium-139	U	-0.802	+/-2.75	4.67		pCi/L					
Cerium-141	U	-20.8	+/-8.47	11.4		pCi/L					
Cerium-144	U	-10.6	+/-19.0	28.5		pCi/L					
Cesium-134	U	1.13	+/-2.83	5.52		pCi/L					
Cesium-136	U	-2.49	+/-11.8	21.4		pCi/L					
Cesium-137	U	-1.35	+/-3.39	5.24	10.0	pCi/L					
Chromium-51	U	39.2	+/-50.0	72.5		pCi/L					
Cobalt-56	U	-1.49	+/-3.32	5.87		pCi/L					
Cobalt-57	U	0.786	+/-2.16	3.88		pCi/L					
Cobalt-58	U	0.781	+/-3.38	6.42		pCi/L					
Cobalt-60	U	1.90	+/-3.07	6.32		pCi/L					
Europium-152	U	1.37	+/-8.13	14.9		pCi/L					
Europium-154	U	-4.08	+/-8.68	14.9		pCi/L					
Europium-155	U	5.70	+/-10.1	16.6		pCi/L					
Iridium-192	U	1.31	+/-3.61	5.95		pCi/L					
Iron-59	U	-2.89	+/-8.58	12.8		pCi/L					
Lead-210	U	-328	+/-831	1180		pCi/L					
Lead-212	U	0.0286	+/-8.00	8.81		pCi/L					
Lead-214	U	2.22	+/-9.21	10.8		pCi/L					
Manganese-54	U	-2.37	+/-2.70	4.55		pCi/L					
Mercury-203	U	-0.232	+/-3.68	6.68		pCi/L					
Neodymium-147	U	27.8	+/-103	166		pCi/L					
Neptunium-239	U	4.65	+/-22.4	40.0		pCi/L					
Niobium-94	U	1.24	+/-3.05	5.77		pCi/L					
Niobium-95	U	-1.38	+/-4.54	6.80		pCi/L					
Potassium-40	U	17.5	+/-58.4	53.4		pCi/L					
Promethium-144	U	0.190	+/-3.28	6.04		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	352805021	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0029	+/-4.07	6.39	pCi/L
Radium-228	U	2.89	+/-17.4	24.5	pCi/L
Ruthenium-106	U	-20.5	+/-27.7	45.4	pCi/L
Silver-110m	U	-0.0157	+/-2.94	5.19	pCi/L
Sodium-22	U	-1.45	+/-3.08	5.28	pCi/L
Thallium-208	U	4.27	+/-4.14	5.38	pCi/L
Thorium-230	U	747	+/-1360	1990	pCi/L
Thorium-234	U	76.9	+/-235	226	pCi/L
Tin-113	U	2.22	+/-3.95	7.39	pCi/L
Uranium-235	U	-28.8	+/-22.0	31.9	pCi/L
Uranium-238	U	76.9	+/-235	226	pCi/L
Yttrium-88	U	3.09	+/-3.38	7.17	pCi/L
Zinc-65	U	-0.839	+/-6.25	9.82	pCi/L
Zirconium-95	U	-0.663	+/-6.46	11.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.18	+/-2.99	3.30	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta	6.38	+/-2.95	4.04	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	69.9	+/-108	184	300	pCi/L	MYM1	08/10/14	1317	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	352805022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 08:25		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.47	+/-21.7	21.9		pCi/L		MJH1	08/04/14	1614 1405431	1
Americium-241	U	-7.34	+/-12.2	19.0		pCi/L					
Antimony-124	U	4.91	+/-9.04	17.9		pCi/L					
Antimony-125	U	0.891	+/-7.12	12.7		pCi/L					
Barium-133	U	1.32	+/-3.30	6.00		pCi/L					
Barium-140	U	6.04	+/-16.3	31.3		pCi/L					
Beryllium-7	U	24.0	+/-30.1	55.8		pCi/L					
Bismuth-212	U	38.3	+/-43.2	75.0		pCi/L					
Bismuth-214	U	0.0521	+/-7.96	9.80		pCi/L					
Cerium-139	U	-2.68	+/-2.69	4.37		pCi/L					
Cerium-141	U	2.10	+/-10.5	10.9		pCi/L					
Cerium-144	U	-6.69	+/-16.9	27.3		pCi/L					
Cesium-134	U	-3.6	+/-3.36	4.80		pCi/L					
Cesium-136	U	-4.39	+/-15.7	27.4		pCi/L					
Cesium-137	U	-0.929	+/-4.32	6.21	10.0	pCi/L					
Chromium-51	U	2.36	+/-42.0	75.1		pCi/L					
Cobalt-56	U	2.45	+/-1.80	6.04		pCi/L					
Cobalt-57	U	0.496	+/-2.07	3.64		pCi/L					
Cobalt-58	U	1.03	+/-3.17	5.95		pCi/L					
Cobalt-60	U	-0.835	+/-2.80	5.07		pCi/L					
Europium-152	U	-3.85	+/-7.85	13.6		pCi/L					
Europium-154	U	7.02	+/-8.26	16.8		pCi/L					
Europium-155	U	-1.9	+/-7.89	13.7		pCi/L					
Iridium-192	U	0.458	+/-3.15	5.66		pCi/L					
Iron-59	U	2.95	+/-7.10	13.5		pCi/L					
Lead-210	U	284	+/-459	453		pCi/L					
Lead-212	U	1.98	+/-8.74	10.1		pCi/L					
Lead-214	U	-3.35	+/-7.86	10.4		pCi/L					
Manganese-54	U	1.09	+/-2.82	5.27		pCi/L					
Mercury-203	U	1.98	+/-4.51	6.69		pCi/L					
Neodymium-147	U	-11.9	+/-114	173		pCi/L					
Neptunium-239	U	-9.05	+/-21.6	36.9		pCi/L					
Niobium-94	U	-1.2	+/-2.57	4.51		pCi/L					
Niobium-95	UI	0.00	+/-4.35	5.86		pCi/L					
Potassium-40	U	15.6	+/-47.3	43.8		pCi/L					
Promethium-144	U	0.0454	+/-4.57	5.02		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Project: WNUC00127  
Sample ID: 352805022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.527	+/-3.37	5.86	pCi/L
Radium-228	U	8.47	+/-21.7	21.9	pCi/L
Ruthenium-106	U	33.8	+/-39.0	44.2	pCi/L
Silver-110m	U	-3.68	+/-2.90	4.80	pCi/L
Sodium-22	U	2.64	+/-2.95	6.01	pCi/L
Thallium-208	U	1.28	+/-5.21	4.33	pCi/L
Thorium-230	U	1050	+/-1370	1470	pCi/L
Thorium-234	U	10.1	+/-137	166	pCi/L
Tin-113	U	-0.0924	+/-3.66	6.47	pCi/L
Uranium-235	U	5.04	+/-25.1	28.4	pCi/L
Uranium-238	U	10.1	+/-137	166	pCi/L
Yttrium-88	U	0.547	+/-4.02	6.64	pCi/L
Zinc-65	U	-3.25	+/-5.97	10.1	pCi/L
Zirconium-95	U	-0.921	+/-6.82	10.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.642	+/-2.45	4.73	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta	U	1.74	+/-2.43	4.16	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	10.2	+/-107	187	300	pCi/L	MYM1	08/10/14	1334	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	352805023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:24		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.31	+/-17.9	31.6		pCi/L		MJH1	08/05/14	1452 1405431	1
Americium-241	U	4.57	+/-30.0	46.8		pCi/L					
Antimony-124	U	9.58	+/-9.89	23.2		pCi/L					
Antimony-125	U	3.77	+/-12.7	21.4		pCi/L					
Barium-133	U	-6.47	+/-5.32	8.33		pCi/L					
Barium-140	U	-0.641	+/-17.7	34.5		pCi/L					
Beryllium-7	U	-26.5	+/-41.5	71.8		pCi/L					
Bismuth-212	U	82.8	+/-80.5	121		pCi/L					
Bismuth-214	U	8.06	+/-15.1	17.3		pCi/L					
Cerium-139	U	-1.58	+/-3.90	6.79		pCi/L					
Cerium-141	U	-0.522	+/-9.57	17.1		pCi/L					
Cerium-144	U	-4.64	+/-24.0	42.8		pCi/L					
Cesium-134	U	-0.321	+/-4.69	7.23		pCi/L					
Cesium-136	U	-0.825	+/-25.5	40.4		pCi/L					
Cesium-137	U	1.72	+/-4.45	8.28	10.0	pCi/L					
Chromium-51	U	-18.6	+/-54.7	93.2		pCi/L					
Cobalt-56	U	1.44	+/-4.50	8.76		pCi/L					
Cobalt-57	U	-2.2	+/-3.20	5.58		pCi/L					
Cobalt-58	U	-4.67	+/-4.61	7.73		pCi/L					
Cobalt-60	U	-2.22	+/-4.49	7.73		pCi/L					
Europium-152	U	-5.19	+/-11.6	19.5		pCi/L					
Europium-154	U	9.16	+/-9.88	21.7		pCi/L					
Europium-155	U	4.80	+/-13.8	23.8		pCi/L					
Iridium-192	U	1.29	+/-4.46	7.96		pCi/L					
Iron-59	U	-5.34	+/-12.0	18.5		pCi/L					
Lead-210	U	655	+/-1000	1640		pCi/L					
Lead-212		14.6	+/-13.2	11.3		pCi/L					
Lead-214	U	3.51	+/-11.1	17.3		pCi/L					
Manganese-54	U	-0.791	+/-3.51	6.49		pCi/L					
Mercury-203	U	3.47	+/-6.18	9.93		pCi/L					
Neodymium-147	U	-1.52	+/-124	226		pCi/L					
Neptunium-239	U	-26.4	+/-31.7	55.0		pCi/L					
Niobium-94	U	2.34	+/-3.62	6.95		pCi/L					
Niobium-95	U	0.480	+/-5.67	10.2		pCi/L					
Potassium-40	U	10.0	+/-61.3	102		pCi/L					
Promethium-144	U	-0.355	+/-4.45	7.86		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 39 Project: WNUC00127  
Sample ID: 352805023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.82	+/-4.59	8.67	pCi/L
Radium-228	U	3.31	+/-17.9	31.6	pCi/L
Ruthenium-106	U	8.50	+/-77.0	72.6	pCi/L
Silver-110m	U	-3.25	+/-5.20	7.51	pCi/L
Sodium-22	U	3.25	+/-3.51	8.39	pCi/L
Thallium-208	U	6.69	+/-7.96	6.69	pCi/L
Thorium-230	U	-516	+/-1840	2750	pCi/L
Thorium-234	U	139	+/-311	359	pCi/L
Tin-113	U	0.480	+/-5.38	9.93	pCi/L
Uranium-235	U	0.546	+/-28.6	46.1	pCi/L
Uranium-238	U	139	+/-311	359	pCi/L
Yttrium-88	U	-2.26	+/-5.12	9.18	pCi/L
Zinc-65	U	-0.12	+/-9.01	16.7	pCi/L
Zirconium-95	U	-9.31	+/-8.47	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.17	+/-4.11	4.60	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta	17.4	+/-3.93	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-111	192	300	pCi/L	MYM1	08/10/14	1351	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 352805024  
Matrix: Ground Water  
Collect Date: 14-JUL-14 10:05  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.79	+/-14.9	24.0		pCi/L		MJH1	08/04/14	1615 1405431	1
Americium-241	U	7.78	+/-17.7	27.4		pCi/L					
Antimony-124	U	-0.876	+/-9.53	15.0		pCi/L					
Antimony-125	U	-0.884	+/-7.94	14.0		pCi/L					
Barium-133	U	4.06	+/-5.81	6.71		pCi/L					
Barium-140	U	6.94	+/-11.0	22.1		pCi/L					
Beryllium-7	U	22.2	+/-33.5	58.7		pCi/L					
Bismuth-212	U	-22.8	+/-49.7	74.1		pCi/L					
Bismuth-214	U	8.32	+/-7.69	12.8		pCi/L					
Cerium-139	U	1.08	+/-2.99	5.12		pCi/L					
Cerium-141	U	4.35	+/-7.34	12.7		pCi/L					
Cerium-144	U	4.47	+/-20.1	34.3		pCi/L					
Cesium-134	U	-0.841	+/-3.28	5.67		pCi/L					
Cesium-136	U	-4.21	+/-11.8	21.1		pCi/L					
Cesium-137	U	-0.766	+/-3.50	5.22	10.0	pCi/L					
Chromium-51	U	-8.61	+/-40.4	70.9		pCi/L					
Cobalt-56	U	-1.76	+/-3.86	6.50		pCi/L					
Cobalt-57	U	-2.16	+/-2.59	4.24		pCi/L					
Cobalt-58	U	3.07	+/-3.56	6.75		pCi/L					
Cobalt-60	U	0.474	+/-3.82	5.62		pCi/L					
Europium-152	U	-0.978	+/-9.58	15.9		pCi/L					
Europium-154	U	-2.13	+/-9.07	16.4		pCi/L					
Europium-155	U	6.47	+/-11.4	17.5		pCi/L					
Iridium-192	U	3.58	+/-3.53	6.56		pCi/L					
Iron-59	U	0.0553	+/-7.77	14.3		pCi/L					
Lead-210	U	-661	+/-567	768		pCi/L					
Lead-212	UI	0.00	+/-11.9	11.1		pCi/L					
Lead-214	UI	0.00	+/-14.9	13.3		pCi/L					
Manganese-54	U	-0.162	+/-2.87	5.05		pCi/L					
Mercury-203	U	4.63	+/-3.73	7.01		pCi/L					
Neodymium-147	U	28.6	+/-69.7	121		pCi/L					
Neptunium-239	U	3.77	+/-26.6	45.5		pCi/L					
Niobium-94	U	1.52	+/-2.80	5.15		pCi/L					
Niobium-95	U	-0.866	+/-3.52	5.72		pCi/L					
Potassium-40	U	9.61	+/-46.3	79.7		pCi/L					
Promethium-144	U	0.408	+/-2.91	5.20		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 352805024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.471	+/-3.81	6.69	pCi/L
Radium-228	U	-6.79	+/-14.9	24.0	pCi/L
Ruthenium-106	U	10.6	+/-27.8	49.4	pCi/L
Silver-110m	U	0.700	+/-3.35	5.24	pCi/L
Sodium-22	U	-0.0599	+/-3.15	5.83	pCi/L
Thallium-208	U	2.71	+/-4.58	6.73	pCi/L
Thorium-230	U	-89.9	+/-1210	1810	pCi/L
Thorium-234	U	100	+/-183	223	pCi/L
Tin-113	U	0.833	+/-4.28	7.66	pCi/L
Uranium-235	U	15.4	+/-20.7	35.9	pCi/L
Uranium-238	U	100	+/-183	223	pCi/L
Yttrium-88	U	2.02	+/-4.74	8.13	pCi/L
Zinc-65	U	0.144	+/-6.57	12.1	pCi/L
Zirconium-95	U	12.1	+/-11.8	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.19	+/-2.75	3.45	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta	24.3	+/-4.29	4.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	54.6	+/-115	197	300	pCi/L	MYM1	08/10/14	1408	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	352805025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.39	+/-17.6	21.1		pCi/L		MJH1	08/04/14	1615 1405431	1
Americium-241	U	7.35	+/-9.12	15.0		pCi/L					
Antimony-124	U	2.47	+/-7.99	15.3		pCi/L					
Antimony-125	U	0.0401	+/-6.87	12.4		pCi/L					
Barium-133	U	-2.78	+/-3.25	5.59		pCi/L					
Barium-140	U	9.49	+/-11.7	21.7		pCi/L					
Beryllium-7	U	-6.48	+/-28.7	50.7		pCi/L					
Bismuth-212	U	-46.7	+/-47.1	62.5		pCi/L					
Bismuth-214	U	3.23	+/-9.59	9.56		pCi/L					
Cerium-139	U	0.044	+/-2.40	4.17		pCi/L					
Cerium-141	U	-1.52	+/-6.31	10.5		pCi/L					
Cerium-144	U	-6.89	+/-16.0	26.5		pCi/L					
Cesium-134	U	1.09	+/-2.93	5.09		pCi/L					
Cesium-136	U	-8.08	+/-12.1	21.0		pCi/L					
Cesium-137	U	-0.169	+/-2.88	5.09	10.0	pCi/L					
Chromium-51	U	-33.7	+/-44.1	61.7		pCi/L					
Cobalt-56	U	0.414	+/-3.17	5.68		pCi/L					
Cobalt-57	U	-0.0367	+/-2.08	3.64		pCi/L					
Cobalt-58	U	0.0437	+/-3.82	5.83		pCi/L					
Cobalt-60	U	1.93	+/-2.98	5.79		pCi/L					
Europium-152	U	-2.18	+/-8.29	13.9		pCi/L					
Europium-154	U	-0.484	+/-8.27	13.1		pCi/L					
Europium-155	U	6.66	+/-6.32	13.4		pCi/L					
Iridium-192	U	2.07	+/-3.02	5.42		pCi/L					
Iron-59	U	-3.09	+/-6.57	11.6		pCi/L					
Lead-210	U	55.3	+/-196	224		pCi/L					
Lead-212	U	5.90	+/-6.96	7.68		pCi/L					
Lead-214	U	7.52	+/-7.44	11.0		pCi/L					
Manganese-54	U	-3.88	+/-2.74	4.24		pCi/L					
Mercury-203	U	3.31	+/-3.68	6.38		pCi/L					
Neodymium-147	U	-33.3	+/-77.6	135		pCi/L					
Neptunium-239	U	-7.49	+/-21.1	36.4		pCi/L					
Niobium-94	U	-0.423	+/-2.71	4.73		pCi/L					
Niobium-95	U	-0.589	+/-3.28	5.73		pCi/L					
Potassium-40	U	36.8	+/-49.0	48.9		pCi/L					
Promethium-144	U	1.77	+/-2.74	5.06		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43 Project: WNUC00127  
Sample ID: 352805025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.661	+/-3.18	5.63	pCi/L
Radium-228	U	5.39	+/-17.6	21.1	pCi/L
Ruthenium-106	U	22.0	+/-44.5	42.7	pCi/L
Silver-110m	U	1.98	+/-2.71	5.05	pCi/L
Sodium-22	U	-0.204	+/-2.93	4.63	pCi/L
Thallium-208	U	0.498	+/-6.33	4.67	pCi/L
Thorium-230	U	562	+/-703	1150	pCi/L
Thorium-234	U	104	+/-149	125	pCi/L
Tin-113	U	0.0758	+/-3.48	6.27	pCi/L
Uranium-235	U	-8.89	+/-20.8	27.3	pCi/L
Uranium-238	U	104	+/-149	125	pCi/L
Yttrium-88	U	-0.134	+/-3.04	5.74	pCi/L
Zinc-65	U	2.16	+/-5.98	10.1	pCi/L
Zirconium-95	U	-3.94	+/-5.63	9.41	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.05	+/-1.85	3.39	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta		8.38	+/-2.92	3.46	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-12.5	+/-108	190	300	pCi/L	MYM1	08/10/14	1425	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	352805026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.91	+/-15.4	25.3		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	1.47	+/-4.42	7.09		pCi/L					
Antimony-124	U	-2.55	+/-9.75	17.6		pCi/L					
Antimony-125	U	-2.05	+/-7.25	12.9		pCi/L					
Barium-133	U	-0.639	+/-3.67	5.77		pCi/L					
Barium-140	U	7.11	+/-16.9	33.0		pCi/L					
Beryllium-7	U	-0.405	+/-34.4	56.3		pCi/L					
Bismuth-212	U	-0.172	+/-41.9	74.1		pCi/L					
Bismuth-214	U	0.235	+/-7.99	12.1		pCi/L					
Cerium-139	U	-2.0	+/-2.64	3.96		pCi/L					
Cerium-141	U	4.65	+/-6.62	9.64		pCi/L					
Cerium-144	U	18.4	+/-14.9	26.6		pCi/L					
Cesium-134	U	-4.69	+/-5.05	6.56		pCi/L					
Cesium-136	U	-6.83	+/-19.2	33.3		pCi/L					
Cesium-137	U	-1.3	+/-3.13	5.36	10.0	pCi/L					
Chromium-51	U	-33.8	+/-42.8	70.5		pCi/L					
Cobalt-56	U	-1.41	+/-4.02	7.11		pCi/L					
Cobalt-57	U	0.463	+/-1.87	3.20		pCi/L					
Cobalt-58	U	-1.44	+/-4.21	6.38		pCi/L					
Cobalt-60	U	1.47	+/-3.36	6.58		pCi/L					
Europium-152	U	2.32	+/-8.23	14.5		pCi/L					
Europium-154	U	6.11	+/-9.10	18.3		pCi/L					
Europium-155	U	-5.73	+/-6.62	10.8		pCi/L					
Iridium-192	U	1.62	+/-3.30	5.89		pCi/L					
Iron-59	U	-6.99	+/-8.99	14.9		pCi/L					
Lead-210	U	4.41	+/-74.7	67.2		pCi/L					
Lead-212	U	2.46	+/-8.14	8.96		pCi/L					
Lead-214	U	-1.87	+/-7.15	10.6		pCi/L					
Manganese-54	U	-0.569	+/-3.32	5.96		pCi/L					
Mercury-203	U	2.10	+/-3.74	6.72		pCi/L					
Neodymium-147	U	-14.8	+/-103	182		pCi/L					
Neptunium-239	U	-8.48	+/-18.7	31.0		pCi/L					
Niobium-94	U	0.234	+/-3.10	5.48		pCi/L					
Niobium-95	U	3.02	+/-3.86	7.51		pCi/L					
Potassium-40	U	33.6	+/-52.7	44.2		pCi/L					
Promethium-144	U	1.11	+/-3.29	5.93		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 352805026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.08	+/-3.69	6.76	pCi/L
Radium-228	U	2.91	+/-15.4	25.3	pCi/L
Ruthenium-106	U	-33	+/-31.8	51.7	pCi/L
Silver-110m	U	-1.2	+/-3.08	5.28	pCi/L
Sodium-22	U	2.17	+/-3.23	6.50	pCi/L
Thallium-208	U	0.656	+/-6.19	5.71	pCi/L
Thorium-230	U	-208	+/-418	675	pCi/L
Thorium-234	U	30.3	+/-79.8	70.7	pCi/L
Tin-113	U	-5.11	+/-3.68	6.08	pCi/L
Uranium-235	U	11.4	+/-16.3	26.4	pCi/L
Uranium-238	U	30.3	+/-79.8	70.7	pCi/L
Yttrium-88	U	1.41	+/-4.72	9.28	pCi/L
Zinc-65	U	0.463	+/-6.84	10.9	pCi/L
Zirconium-95	U	3.76	+/-6.68	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.18	+/-2.16	3.29	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta	U	0.586	+/-2.09	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	49.8	+/-109	187	300	pCi/L	MYM1	08/10/14	1442	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 09:08		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.929	+/-18.9	21.1		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	3.86	+/-8.20	14.6		pCi/L					
Antimony-124	U	-2.69	+/-7.24	12.7		pCi/L					
Antimony-125	U	-0.889	+/-6.85	11.8		pCi/L					
Barium-133	U	-1.81	+/-3.48	5.89		pCi/L					
Barium-140	U	-9.53	+/-12.9	21.5		pCi/L					
Beryllium-7	U	26.3	+/-30.7	55.4		pCi/L					
Bismuth-212	U	12.1	+/-38.4	69.9		pCi/L					
Bismuth-214	U	4.76	+/-9.71	12.0		pCi/L					
Cerium-139	U	0.647	+/-2.66	4.01		pCi/L					
Cerium-141	U	-4.68	+/-8.28	10.4		pCi/L					
Cerium-144	U	11.1	+/-16.5	28.5		pCi/L					
Cesium-134	U	1.43	+/-2.99	5.52		pCi/L					
Cesium-136	U	4.35	+/-12.5	23.7		pCi/L					
Cesium-137	U	0.103	+/-2.53	4.58	10.0	pCi/L					
Chromium-51	U	26.9	+/-38.6	69.7		pCi/L					
Cobalt-56	U	1.32	+/-3.36	6.13		pCi/L					
Cobalt-57	U	1.24	+/-2.05	3.55		pCi/L					
Cobalt-58	U	-0.473	+/-2.92	5.17		pCi/L					
Cobalt-60	U	-2.35	+/-3.00	5.05		pCi/L					
Europium-152	U	4.61	+/-9.03	14.2		pCi/L					
Europium-154	U	3.95	+/-7.86	13.5		pCi/L					
Europium-155	U	1.33	+/-7.48	12.9		pCi/L					
Iridium-192	U	-0.972	+/-2.98	5.14		pCi/L					
Iron-59	U	1.34	+/-6.89	12.9		pCi/L					
Lead-210	U	49.6	+/-275	249		pCi/L					
Lead-212	U	1.89	+/-8.52	8.29		pCi/L					
Lead-214	U	-3.56	+/-7.66	10.7		pCi/L					
Manganese-54	U	-0.582	+/-2.81	4.90		pCi/L					
Mercury-203	U	-0.949	+/-4.47	6.20		pCi/L					
Neodymium-147	U	18.2	+/-82.2	151		pCi/L					
Neptunium-239	U	-7.99	+/-23.4	34.7		pCi/L					
Niobium-94	U	3.22	+/-3.35	4.77		pCi/L					
Niobium-95	U	0.905	+/-3.16	5.77		pCi/L					
Potassium-40	U	-13.3	+/-46.3	72.4		pCi/L					
Promethium-144	U	-0.673	+/-3.27	4.95		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.532	+/-3.36	5.75	pCi/L
Radium-228	U	0.929	+/-18.9	21.1	pCi/L
Ruthenium-106	U	4.61	+/-25.8	46.8	pCi/L
Silver-110m	U	0.802	+/-2.52	4.63	pCi/L
Sodium-22	U	-2.49	+/-5.66	4.78	pCi/L
Thallium-208	U	2.28	+/-3.86	4.60	pCi/L
Thorium-230	UI	0.00	+/-1220	1210	pCi/L
Thorium-234	U	-72.2	+/-115	161	pCi/L
Tin-113	U	-0.91	+/-3.71	6.34	pCi/L
Uranium-235	U	0.0697	+/-17.9	27.3	pCi/L
Uranium-238	U	-72.2	+/-115	161	pCi/L
Yttrium-88	U	-3.14	+/-2.76	4.40	pCi/L
Zinc-65	U	-4.3	+/-5.79	9.97	pCi/L
Zirconium-95	U	-0.514	+/-5.44	9.70	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		3.91	+/-2.46	3.01	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta		58.8	+/-5.32	4.83	5.00	pCi/L					
Alpha	U	2.27	+/-3.15	3.89	5.00	pCi/L	JXH3	08/13/14	1018	1406421	3
Beta		51.5	+/-6.16	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	156	+/-122	201	300	pCi/L	MYM1	08/11/14	0813	1407037	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	352805028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JUL-14 10:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.12	+/-17.9	21.2		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	1.02	+/-16.3	28.2		pCi/L					
Antimony-124	U	-1.42	+/-7.08	13.2		pCi/L					
Antimony-125	U	-2.52	+/-6.96	11.7		pCi/L					
Barium-133	U	-4.8	+/-3.39	5.34		pCi/L					
Barium-140	U	-3.34	+/-9.19	16.8		pCi/L					
Beryllium-7	U	5.43	+/-27.5	50.4		pCi/L					
Bismuth-212	U	-22.5	+/-47.8	62.0		pCi/L					
Bismuth-214	U	4.29	+/-9.51	11.4		pCi/L					
Cerium-139	U	0.235	+/-2.73	4.31		pCi/L					
Cerium-141	U	1.70	+/-5.84	10.2		pCi/L					
Cerium-144	U	10.1	+/-17.1	28.2		pCi/L					
Cesium-134	U	-2.11	+/-2.90	4.82		pCi/L					
Cesium-136	U	-4.62	+/-10.7	18.9		pCi/L					
Cesium-137	U	-2.87	+/-4.08	6.10	10.0	pCi/L					
Chromium-51	U	-8.07	+/-41.5	62.0		pCi/L					
Cobalt-56	U	1.10	+/-3.16	5.76		pCi/L					
Cobalt-57	U	-0.676	+/-2.47	3.61		pCi/L					
Cobalt-58	U	0.129	+/-3.46	5.35		pCi/L					
Cobalt-60	U	1.35	+/-3.04	5.81		pCi/L					
Europium-152	U	2.05	+/-7.61	13.4		pCi/L					
Europium-154	U	5.64	+/-8.18	14.6		pCi/L					
Europium-155	U	10.8	+/-8.63	15.5		pCi/L					
Iridium-192	U	2.55	+/-3.00	5.46		pCi/L					
Iron-59	U	-3.86	+/-6.80	11.8		pCi/L					
Lead-210	U	443	+/-741	822		pCi/L					
Lead-212	U	2.28	+/-6.93	9.65		pCi/L					
Lead-214	U	0.287	+/-7.48	10.6		pCi/L					
Manganese-54	U	-1.39	+/-3.20	4.72		pCi/L					
Mercury-203	U	3.44	+/-4.54	4.76		pCi/L					
Neodymium-147	U	-51.9	+/-61.2	104		pCi/L					
Neptunium-239	U	2.55	+/-25.6	38.4		pCi/L					
Niobium-94	U	0.0815	+/-2.62	4.66		pCi/L					
Niobium-95	U	0.562	+/-4.03	5.88		pCi/L					
Potassium-40	UI	0.00	+/-66.9	43.6		pCi/L					
Promethium-144	U	0.0823	+/-2.74	4.88		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48  
Sample ID: 352805028

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0275	+/-3.21	5.82	pCi/L
Radium-228	U	3.12	+/-17.9	21.2	pCi/L
Ruthenium-106	U	-6.42	+/-25.5	44.9	pCi/L
Silver-110m	U	-4.73	+/-3.03	4.79	pCi/L
Sodium-22	U	1.96	+/-2.89	5.15	pCi/L
Thallium-208	U	0.718	+/-3.85	5.82	pCi/L
Thorium-230	U	-615	+/-1240	1880	pCi/L
Thorium-234	U	-48.7	+/-177	266	pCi/L
Tin-113	U	3.57	+/-3.72	6.80	pCi/L
Uranium-235	U	-1.36	+/-22.0	29.4	pCi/L
Uranium-238	U	-48.7	+/-177	266	pCi/L
Yttrium-88	U	2.17	+/-3.10	6.47	pCi/L
Zinc-65	U	1.27	+/-6.10	11.4	pCi/L
Zirconium-95	U	0.889	+/-5.09	9.28	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.204	+/-1.60	3.56	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta		12.6	+/-3.85	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	85.9	+/-114	193	300	pCi/L	MYM1	08/10/14	1515	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## QC Summary

Report Date: August 20, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 352805

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1411601										
QC1203148403	352805019	DUP									
Uranium-233/234		30.0		36.0	pCi/L	18.2		(0%-20%)	HAKB	08/15/14	09:54
	Uncertainty	+/-2.93		+/-3.40							
Uranium-235/236		1.28		1.23	pCi/L	3.73		(0% - 100%)			
	Uncertainty	+/-0.693		+/-0.726							
Uranium-238		9.27		8.93	pCi/L	3.76		(0%-20%)			
	Uncertainty	+/-1.63		+/-1.70							
QC1203148404	LCS										
Uranium-233/234				28.0	pCi/L					08/15/14	09:54
	Uncertainty			+/-3.16							
Uranium-235/236			U	0.490	pCi/L						
	Uncertainty			+/-0.560							
Uranium-238		27.2		29.1	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3.23							
QC1203148402	MB										
Uranium-233/234			U	-0.357	pCi/L					08/15/14	09:54
	Uncertainty			+/-0.234							
Uranium-235/236			U	-0.049	pCi/L						
	Uncertainty			+/-0.217							
Uranium-238			U	-0.119	pCi/L						
	Uncertainty			+/-0.192							
<b>Rad Gamma Spec</b>											
Batch	1405429										
QC1203132576	352805001	DUP									
Actinium-228		U	-1.29	U	20.3	pCi/L	N/A		N/A	MJH1	08/02/14 10:37
	Uncertainty		+/-20.9		+/-17.0						
Americium-241		U	0.613	U	-26.5	pCi/L	N/A		N/A		
	Uncertainty		+/-26.0		+/-26.2						
Antimony-124		U	7.50	U	-3.31	pCi/L	N/A		N/A		
	Uncertainty		+/-11.5		+/-8.48						
Antimony-125		U	3.72	U	3.38	pCi/L	N/A		N/A		
	Uncertainty		+/-13.5		+/-8.09						
Barium-133		U	1.41	U	-0.281	pCi/L	N/A		N/A		
	Uncertainty		+/-6.10		+/-4.38						
Barium-140		U	-17.8	U	-0.00897	pCi/L	N/A		N/A		
	Uncertainty		+/-16.1		+/-9.26						
Beryllium-7		U	-0.334	U	4.50	pCi/L	N/A		N/A		
	Uncertainty		+/-43.5		+/-29.4						
Bismuth-212		U	7.60	U	-11.8	pCi/L	N/A		N/A		
	Uncertainty		+/-64.0		+/-43.1						
Bismuth-214		U	-9.48	U	3.46	pCi/L	N/A		N/A		

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 352805

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1405429										
	Uncertainty										
		+/-12.2		+/-12.7							
Cerium-139	U	1.22	U	-0.435	pCi/L	N/A		N/A	MJH1	08/02/14	10:37
	Uncertainty	+/-4.23		+/-3.00							
Cerium-141	U	-4.21	U	-1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-9.06		+/-9.69							
Cerium-144	U	24.2	U	-9.24	pCi/L	N/A		N/A			
	Uncertainty	+/-30.2		+/-20.0							
Cesium-134	U	-1.86	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-5.95		+/-4.79							
Cesium-136	U	2.37	U	3.91	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-10.7							
Cesium-137	U	4.42	U	-0.678	pCi/L	N/A		N/A			
	Uncertainty	+/-5.86		+/-3.05							
Chromium-51	U	19.4	U	1.72	pCi/L	N/A		N/A			
	Uncertainty	+/-60.0		+/-39.4							
Cobalt-56	U	0.985	U	-0.501	pCi/L	N/A		N/A			
	Uncertainty	+/-5.27		+/-3.94							
Cobalt-57	U	-4.66	U	-0.407	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-2.73							
Cobalt-58	U	0.235	U	-2.83	pCi/L	N/A		N/A			
	Uncertainty	+/-5.29		+/-3.25							
Cobalt-60	U	-0.16	U	0.311	pCi/L	N/A		N/A			
	Uncertainty	+/-5.73		+/-3.04							
Europium-152	U	13.7	U	2.41	pCi/L	N/A		N/A			
	Uncertainty	+/-18.2		+/-10.4							
Europium-154	U	-7.72	U	-5.15	pCi/L	N/A		N/A			
	Uncertainty	+/-14.8		+/-8.48							
Europium-155	U	-3.63	U	-1.4	pCi/L	N/A		N/A			
	Uncertainty	+/-14.5		+/-10.9							
Iridium-192	U	7.43	U	-3.6	pCi/L	N/A		N/A			
	Uncertainty	+/-6.76		+/-3.38							
Iron-59	U	-10.3	U	-3.46	pCi/L	N/A		N/A			
	Uncertainty	+/-11.1		+/-7.44							
Lead-210	U	-288	U	-973	pCi/L	N/A		N/A			
	Uncertainty	+/-1000		+/-1380							
Lead-212	U	11.5	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-13.5		+/-9.26							
Lead-214	U	12.6	U	9.95	pCi/L	N/A		N/A			
	Uncertainty	+/-16.1		+/-11.1							
Manganese-54	U	-0.952	U	-0.551	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-5.21							
Mercury-203	U	1.69	U	1.43	pCi/L	N/A		N/A			
	Uncertainty	+/-5.40		+/-3.98							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Neodymium-147	U	20.0	U	5.16	pCi/L	N/A		N/A			
	Uncertainty	+/-81.4		+/-61.4							
Neptunium-239	U	7.77	U	-6.02	pCi/L	N/A		N/A	MJH1	08/02/14	10:37
	Uncertainty	+/-36.3		+/-27.5							
Niobium-94	U	0.283	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-4.65		+/-2.78							
Niobium-95	UI	0.00	U	-3.03	pCi/L	N/A		N/A			
	Uncertainty	+/-5.18		+/-3.52							
Potassium-40	U	-35.3	U	2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-70.7		+/-51.9							
Promethium-144	U	-1.72	U	-0.854	pCi/L	N/A		N/A			
	Uncertainty	+/-6.08		+/-3.10							
Promethium-146	U	3.01	U	-2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-6.14		+/-3.79							
Radium-228	U	-1.29	U	20.3	pCi/L	N/A		N/A			
	Uncertainty	+/-20.9		+/-17.0							
Ruthenium-106	U	-21.4	U	14.1	pCi/L	N/A		N/A			
	Uncertainty	+/-43.2		+/-28.5							
Silver-110m	U	6.18	U	0.699	pCi/L	N/A		N/A			
	Uncertainty	+/-4.88		+/-2.88							
Sodium-22	U	-2.81	U	-2.52	pCi/L	N/A		N/A			
	Uncertainty	+/-5.22		+/-3.05							
Thallium-208	U	4.34	U	-1.94	pCi/L	N/A		N/A			
	Uncertainty	+/-8.29		+/-4.62							
Thorium-230	U	-1210	U	-810	pCi/L	N/A		N/A			
	Uncertainty	+/-1770		+/-1810							
Thorium-234	U	-315	U	-63.3	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-267							
Tin-113	U	-1.31	U	0.752	pCi/L	N/A		N/A			
	Uncertainty	+/-6.78		+/-4.70							
Uranium-235	U	-25.7	U	4.10	pCi/L	N/A		N/A			
	Uncertainty	+/-31.2		+/-26.2							
Uranium-238	U	-315	U	-63.3	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-267							
Yttrium-88	U	-0.238	U	-0.123	pCi/L	N/A		N/A			
	Uncertainty	+/-6.27		+/-3.90							
Zinc-65	U	-10.9	U	-3.3	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-6.82							
Zirconium-95	U	7.42	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-6.89							
QC1203132577	LCS										
Actinium-228			U	-710	pCi/L					08/04/14	11:39
	Uncertainty			+/-1040							
Americium-241	1.10E+05			1.21E+05	pCi/L		109	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
				+/-3440							
Antimony-124			U	-80	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-217							
Antimony-125			U	140	pCi/L						
	Uncertainty			+/-581							
Barium-133			U	-12.2	pCi/L						
	Uncertainty			+/-237							
Barium-140			U	-33.7	pCi/L						
	Uncertainty			+/-212							
Beryllium-7			U	570	pCi/L						
	Uncertainty			+/-2260							
Bismuth-212			U	-1340	pCi/L						
	Uncertainty			+/-2780							
Bismuth-214			U	-153	pCi/L						
	Uncertainty			+/-371							
Cerium-139				848	pCi/L						
	Uncertainty			+/-204							
Cerium-141			U	-150	pCi/L						
	Uncertainty			+/-287							
Cerium-144			U	642	pCi/L						
	Uncertainty			+/-1170							
Cesium-134			U	217	pCi/L						
	Uncertainty			+/-249							
Cesium-136			U	-130	pCi/L						
	Uncertainty			+/-592							
Cesium-137	44900			46600	pCi/L		104	(75%-125%)			
	Uncertainty			+/-854							
Chromium-51			U	1400	pCi/L						
	Uncertainty			+/-1890							
Cobalt-56			U	-203	pCi/L						
	Uncertainty			+/-270							
Cobalt-57				4520	pCi/L						
	Uncertainty			+/-278							
Cobalt-58			U	222	pCi/L						
	Uncertainty			+/-282							
Cobalt-60	55700			56400	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1050							
Europium-152			U	314	pCi/L						
	Uncertainty			+/-556							
Europium-154			U	-66.3	pCi/L						
	Uncertainty			+/-371							
Europium-155			U	211	pCi/L						
	Uncertainty			+/-574							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Iridium-192			U	-97.6	pCi/L						
	Uncertainty			+/-188							
Iron-59			U	752	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-662							
Lead-210				1.59E+06	pCi/L						
	Uncertainty			+/-83500							
Lead-212			U	343	pCi/L						
	Uncertainty			+/-309							
Lead-214			U	118	pCi/L						
	Uncertainty			+/-411							
Manganese-54			U	-16.2	pCi/L						
	Uncertainty			+/-240							
Mercury-203			U	-244	pCi/L						
	Uncertainty			+/-228							
Neodymium-147			U	-851	pCi/L						
	Uncertainty			+/-2650							
Neptunium-239			U	626	pCi/L						
	Uncertainty			+/-1680							
Niobium-94			U	143	pCi/L						
	Uncertainty			+/-179							
Niobium-95			U	34.9	pCi/L						
	Uncertainty			+/-227							
Potassium-40			U	303	pCi/L						
	Uncertainty			+/-932							
Promethium-144			U	-110	pCi/L						
	Uncertainty			+/-180							
Promethium-146			U	384	pCi/L						
	Uncertainty			+/-320							
Radium-228			U	-710	pCi/L						
	Uncertainty			+/-1040							
Ruthenium-106			U	1630	pCi/L						
	Uncertainty			+/-1790							
Silver-110m				1020	pCi/L						
	Uncertainty			+/-255							
Sodium-22			U	-20.9	pCi/L						
	Uncertainty			+/-130							
Thallium-208			U	129	pCi/L						
	Uncertainty			+/-193							
Thorium-230				1.54E+05	pCi/L						
	Uncertainty			+/-72600							
Thorium-234			U	-24200	pCi/L						
	Uncertainty			+/-9900							
Tin-113				461	pCi/L						
	Uncertainty			+/-365							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Uranium-235			U	-153	pCi/L						
	Uncertainty			+/-986							
Uranium-238			U	-24200	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-9900							
Yttrium-88				818	pCi/L						
	Uncertainty			+/-167							
Zinc-65				14200	pCi/L						
	Uncertainty			+/-1160							
Zirconium-95			U	-30.9	pCi/L						
	Uncertainty			+/-411							
QC1203132575	MB										
Actinium-228			U	4.79	pCi/L					08/02/14	10:36
	Uncertainty			+/-18.0							
Americium-241			U	6.11	pCi/L						
	Uncertainty			+/-9.85							
Antimony-124			U	-3.99	pCi/L						
	Uncertainty			+/-5.73							
Antimony-125			U	1.87	pCi/L						
	Uncertainty			+/-6.88							
Barium-133			U	-2.85	pCi/L						
	Uncertainty			+/-3.17							
Barium-140			U	1.58	pCi/L						
	Uncertainty			+/-6.00							
Beryllium-7			U	-17.7	pCi/L						
	Uncertainty			+/-23.1							
Bismuth-212			U	48.9	pCi/L						
	Uncertainty			+/-29.2							
Bismuth-214			U	1.79	pCi/L						
	Uncertainty			+/-7.38							
Cerium-139			U	-0.014	pCi/L						
	Uncertainty			+/-2.12							
Cerium-141			U	-5.44	pCi/L						
	Uncertainty			+/-4.98							
Cerium-144			U	5.15	pCi/L						
	Uncertainty			+/-15.5							
Cesium-134			U	2.22	pCi/L						
	Uncertainty			+/-2.84							
Cesium-136			U	-5.91	pCi/L						
	Uncertainty			+/-6.01							
Cesium-137			U	1.27	pCi/L						
	Uncertainty			+/-3.60							
Chromium-51			U	-14.5	pCi/L						
	Uncertainty			+/-24.7							
Cobalt-56			U	-3.1	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Cobalt-57	Uncertainty		U	+/-3.00	pCi/L				MJH1	08/02/14	10:36
				1.39							
Cobalt-58	Uncertainty		U	+/-1.83	pCi/L						
				-1.29							
Cobalt-60	Uncertainty		U	+/-2.74	pCi/L						
				-1.18							
Europium-152	Uncertainty		U	+/-3.22	pCi/L						
				+/-7.26							
Europium-154	Uncertainty		U	2.19	pCi/L						
				+/-7.10							
Europium-155	Uncertainty		U	-0.0728	pCi/L						
				+/-7.82							
Iridium-192	Uncertainty		U	0.135	pCi/L						
				+/-2.59							
Iron-59	Uncertainty		U	4.09	pCi/L						
				+/-5.60							
Lead-210	Uncertainty		U	-252	pCi/L						
				+/-277							
Lead-212	Uncertainty		U	0.743	pCi/L						
				+/-6.19							
Lead-214	Uncertainty		U	-5.27	pCi/L						
				+/-7.82							
Manganese-54	Uncertainty		U	-1.66	pCi/L						
				+/-2.71							
Mercury-203	Uncertainty		U	-0.88	pCi/L						
				+/-2.64							
Neodymium-147	Uncertainty		U	-4.67	pCi/L						
				+/-30.9							
Neptunium-239	Uncertainty		U	3.83	pCi/L						
				+/-19.8							
Niobium-94	Uncertainty		U	-0.269	pCi/L						
				+/-2.71							
Niobium-95	Uncertainty		U	1.67	pCi/L						
				+/-2.63							
Potassium-40	Uncertainty		U	25.5	pCi/L						
				+/-39.7							
Promethium-144	Uncertainty		U	1.02	pCi/L						
				+/-3.12							
Promethium-146	Uncertainty		U	-0.156	pCi/L						
				+/-3.30							
Radium-228	Uncertainty		U	4.79	pCi/L						
				+/-18.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1405429										
Ruthenium-106			U	20.7	pCi/L						
	Uncertainty			+/-61.2							
Silver-110m			U	1.24	pCi/L				MJH1	08/02/14	10:36
	Uncertainty			+/-2.62							
Sodium-22			U	0.691	pCi/L						
	Uncertainty			+/-2.49							
Thallium-208			U	3.02	pCi/L						
	Uncertainty			+/-3.55							
Thorium-230			U	-117	pCi/L						
	Uncertainty			+/-699							
Thorium-234			U	-75.6	pCi/L						
	Uncertainty			+/-127							
Tin-113			U	-1.12	pCi/L						
	Uncertainty			+/-3.58							
Uranium-235			U	-11.6	pCi/L						
	Uncertainty			+/-18.2							
Uranium-238			U	-75.6	pCi/L						
	Uncertainty			+/-127							
Yttrium-88			U	2.49	pCi/L						
	Uncertainty			+/-2.82							
Zinc-65			U	-2.69	pCi/L						
	Uncertainty			+/-5.83							
Zirconium-95			U	-1.54	pCi/L						
	Uncertainty			+/-4.58							
Batch	1405431										
QC1203132579 352805021 DUP											
Actinium-228	U	2.89	U	-16.1	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-17.4		+/-17.0							
Americium-241	U	-16.8	U	-8.63	pCi/L	N/A		N/A			
	Uncertainty	+/-19.9		+/-24.8							
Antimony-124	U	-1.5	U	2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-8.62		+/-8.05							
Antimony-125	U	-5.4	U	-2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-8.49		+/-7.46							
Barium-133	U	0.268	U	-0.301	pCi/L	N/A		N/A			
	Uncertainty	+/-3.79		+/-3.94							
Barium-140	U	4.10	U	2.34	pCi/L	N/A		N/A			
	Uncertainty	+/-15.3		+/-15.1							
Beryllium-7	U	16.1	U	-2.0	pCi/L	N/A		N/A			
	Uncertainty	+/-29.8		+/-31.6							
Bismuth-212	U	3.09	U	-22.1	pCi/L	N/A		N/A			
	Uncertainty	+/-47.8		+/-46.9							
Bismuth-214	U	1.11	U	-4.16	pCi/L	N/A		N/A			
	Uncertainty	+/-9.72		+/-8.60							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Cerium-139	U	-0.802	U	-0.954	pCi/L	N/A		N/A			
	Uncertainty	+/-2.75		+/-2.99							
Cerium-141	U	-20.8	U	-3.76	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-8.47		+/-9.63							
Cerium-144	U	-10.6	U	13.4	pCi/L	N/A		N/A			
	Uncertainty	+/-19.0		+/-18.5							
Cesium-134	U	1.13	U	-3.06	pCi/L	N/A		N/A			
	Uncertainty	+/-2.83		+/-4.86							
Cesium-136	U	-2.49	U	2.39	pCi/L	N/A		N/A			
	Uncertainty	+/-11.8		+/-17.3							
Cesium-137	U	-1.35	U	3.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.39		+/-2.85							
Chromium-51	U	39.2	U	33.5	pCi/L	N/A		N/A			
	Uncertainty	+/-50.0		+/-42.4							
Cobalt-56	U	-1.49	U	1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-3.32		+/-3.54							
Cobalt-57	U	0.786	U	1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-2.16		+/-2.45							
Cobalt-58	U	0.781	U	-0.57	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-3.52							
Cobalt-60	U	1.90	U	-1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-3.07		+/-2.87							
Europium-152	U	1.37	U	2.65	pCi/L	N/A		N/A			
	Uncertainty	+/-8.13		+/-7.79							
Europium-154	U	-4.08	U	3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-8.68		+/-7.51							
Europium-155	U	5.70	U	6.87	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-9.65							
Iridium-192	U	1.31	U	-0.0739	pCi/L	N/A		N/A			
	Uncertainty	+/-3.61		+/-3.31							
Iron-59	U	-2.89	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-8.58		+/-7.69							
Lead-210	U	-328	U	263	pCi/L	N/A		N/A			
	Uncertainty	+/-831		+/-1010							
Lead-212	U	0.0286	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-8.00		+/-7.59							
Lead-214	U	2.22	U	5.56	pCi/L	N/A		N/A			
	Uncertainty	+/-9.21		+/-10.9							
Manganese-54	U	-2.37	U	3.99	pCi/L	N/A		N/A			
	Uncertainty	+/-2.70		+/-2.15							
Mercury-203	U	-0.232	U	3.87	pCi/L	N/A		N/A			
	Uncertainty	+/-3.68		+/-2.98							
Neodymium-147	U	27.8	U	-47.9	pCi/L	N/A		N/A			
	Uncertainty	+/-103		+/-93.9							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Neptunium-239	U	4.65	U	-3.34	pCi/L	N/A		N/A			
	Uncertainty	+/-22.4		+/-25.2							
Niobium-94	U	1.24	U	1.21	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-3.05		+/-2.49							
Niobium-95	U	-1.38	U	0.385	pCi/L	N/A		N/A			
	Uncertainty	+/-4.54		+/-4.08							
Potassium-40	U	17.5	U	-20.4	pCi/L	N/A		N/A			
	Uncertainty	+/-58.4		+/-42.2							
Promethium-144	U	0.190	U	-0.198	pCi/L	N/A		N/A			
	Uncertainty	+/-3.28		+/-3.08							
Promethium-146	U	-0.0029	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-4.76							
Radium-228	U	2.89	U	-16.1	pCi/L	N/A		N/A			
	Uncertainty	+/-17.4		+/-17.0							
Ruthenium-106	U	-20.5	U	-11.5	pCi/L	N/A		N/A			
	Uncertainty	+/-27.7		+/-24.9							
Silver-110m	U	-0.0157	U	-1.94	pCi/L	N/A		N/A			
	Uncertainty	+/-2.94		+/-2.80							
Sodium-22	U	-1.45	U	1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-3.08		+/-2.66							
Thallium-208	U	4.27	U	1.62	pCi/L	N/A		N/A			
	Uncertainty	+/-4.14		+/-4.59							
Thorium-230	U	747	U	582	pCi/L	N/A		N/A			
	Uncertainty	+/-1360		+/-1670							
Thorium-234	U	76.9	U	-75.5	pCi/L	N/A		N/A			
	Uncertainty	+/-235		+/-249							
Tin-113	U	2.22	U	1.68	pCi/L	N/A		N/A			
	Uncertainty	+/-3.95		+/-4.14							
Uranium-235	U	-28.8	U	-0.614	pCi/L	N/A		N/A			
	Uncertainty	+/-22.0		+/-25.6							
Uranium-238	U	76.9	U	-75.5	pCi/L	N/A		N/A			
	Uncertainty	+/-235		+/-249							
Yttrium-88	U	3.09	U	-1.1	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-4.20							
Zinc-65	U	-0.839	U	-0.425	pCi/L	N/A		N/A			
	Uncertainty	+/-6.25		+/-5.72							
Zirconium-95	U	-0.663	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-6.46		+/-5.85							
QC1203132580	LCS										
Actinium-228			U	199	pCi/L					08/05/14	09:06
	Uncertainty			+/-1130							
Americium-241	1.10E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3510							
Antimony-124			U	21.7	pCi/L						
	Uncertainty										



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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Antimony-125			U	+/-218 343	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-600							
Barium-133			U	84.4	pCi/L						
	Uncertainty			+/-240							
Barium-140			U	-33	pCi/L						
	Uncertainty			+/-193							
Beryllium-7			U	-1340	pCi/L						
	Uncertainty			+/-2410							
Bismuth-212			U	507	pCi/L						
	Uncertainty			+/-3000							
Bismuth-214			U	-11.7	pCi/L						
	Uncertainty			+/-390							
Cerium-139				1030	pCi/L						
	Uncertainty			+/-278							
Cerium-141			U	200	pCi/L						
	Uncertainty			+/-281							
Cerium-144			U	390	pCi/L						
	Uncertainty			+/-1120							
Cesium-134			U	-93.8	pCi/L						
	Uncertainty			+/-284							
Cesium-136			U	-82.3	pCi/L						
	Uncertainty			+/-809							
Cesium-137	44900			45600	pCi/L		101	(75%-125%)			
	Uncertainty			+/-908							
Chromium-51			U	-988	pCi/L						
	Uncertainty			+/-1960							
Cobalt-56			U	-25.3	pCi/L						
	Uncertainty			+/-293							
Cobalt-57				4320	pCi/L						
	Uncertainty			+/-257							
Cobalt-58			U	35.0	pCi/L						
	Uncertainty			+/-272							
Cobalt-60	55700			56400	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1170							
Europium-152			U	-463	pCi/L						
	Uncertainty			+/-557							
Europium-154			U	61.5	pCi/L						
	Uncertainty			+/-424							
Europium-155			U	522	pCi/L						
	Uncertainty			+/-541							
Iridium-192			U	101	pCi/L						
	Uncertainty			+/-199							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Iron-59			U	127	pCi/L						
	Uncertainty			+/-650							
Lead-210				1.32E+06	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-64700							
Lead-212			U	83.9	pCi/L						
	Uncertainty			+/-303							
Lead-214			U	45.3	pCi/L						
	Uncertainty			+/-410							
Manganese-54			U	113	pCi/L						
	Uncertainty			+/-263							
Mercury-203			U	-59.2	pCi/L						
	Uncertainty			+/-227							
Neodymium-147			U	-629	pCi/L						
	Uncertainty			+/-2730							
Neptunium-239			U	-229	pCi/L						
	Uncertainty			+/-1470							
Niobium-94			U	9.92	pCi/L						
	Uncertainty			+/-195							
Niobium-95			U	-23.6	pCi/L						
	Uncertainty			+/-240							
Potassium-40			U	351	pCi/L						
	Uncertainty			+/-991							
Promethium-144			U	107	pCi/L						
	Uncertainty			+/-228							
Promethium-146			U	-43.5	pCi/L						
	Uncertainty			+/-278							
Radium-228			U	199	pCi/L						
	Uncertainty			+/-1130							
Ruthenium-106			U	458	pCi/L						
	Uncertainty			+/-1850							
Silver-110m				615	pCi/L						
	Uncertainty			+/-256							
Sodium-22			U	21.7	pCi/L						
	Uncertainty			+/-150							
Thallium-208			U	16.1	pCi/L						
	Uncertainty			+/-207							
Thorium-230			U	83200	pCi/L						
	Uncertainty			+/-75300							
Thorium-234			U	-13600	pCi/L						
	Uncertainty			+/-9950							
Tin-113				788	pCi/L						
	Uncertainty			+/-277							
Uranium-235			U	416	pCi/L						
	Uncertainty			+/-944							

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## QC Summary

Workorder: 352805

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Uranium-238			U	-13600	pCi/L						
	Uncertainty			+/-9950							
Yttrium-88				652	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-194							
Zinc-65				14800	pCi/L						
	Uncertainty			+/-1100							
Zirconium-95			U	88.1	pCi/L						
	Uncertainty			+/-441							
QC1203132578	MB										
Actinium-228			U	9.17	pCi/L					08/04/14	16:17
	Uncertainty			+/-19.7							
Americium-241			U	-41.3	pCi/L						
	Uncertainty			+/-6.44							
Antimony-124			U	0.724	pCi/L						
	Uncertainty			+/-10.2							
Antimony-125			U	9.92	pCi/L						
	Uncertainty			+/-9.75							
Barium-133			U	-0.287	pCi/L						
	Uncertainty			+/-4.43							
Barium-140			U	-2.81	pCi/L						
	Uncertainty			+/-10.2							
Beryllium-7			U	32.4	pCi/L						
	Uncertainty			+/-37.3							
Bismuth-212			U	16.2	pCi/L						
	Uncertainty			+/-73.3							
Bismuth-214			U	5.10	pCi/L						
	Uncertainty			+/-11.6							
Cerium-139			U	-1.04	pCi/L						
	Uncertainty			+/-3.01							
Cerium-141			UI	0.00	pCi/L						
	Uncertainty			+/-9.47							
Cerium-144			U	11.0	pCi/L						
	Uncertainty			+/-17.0							
Cesium-134			U	0.127	pCi/L						
	Uncertainty			+/-4.70							
Cesium-136			U	-2.02	pCi/L						
	Uncertainty			+/-9.16							
Cesium-137			U	0.937	pCi/L						
	Uncertainty			+/-4.15							
Chromium-51			U	-25.4	pCi/L						
	Uncertainty			+/-36.7							
Cobalt-56			U	-0.18	pCi/L						
	Uncertainty			+/-5.02							
Cobalt-57			U	0.244	pCi/L						
	Uncertainty										

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1405431										
Cobalt-58				+/-2.11							
			U	-1.37	pCi/L				MJH1	08/04/14	16:17
Cobalt-60	Uncertainty			+/-5.92							
			U	-0.398	pCi/L						
Europium-152	Uncertainty			+/-3.87							
			U	-0.681	pCi/L						
Europium-154	Uncertainty			+/-10.2							
			U	-1.73	pCi/L						
Europium-155	Uncertainty			+/-12.5							
			U	2.32	pCi/L						
Iridium-192	Uncertainty			+/-8.24							
			U	-1.87	pCi/L						
Iron-59	Uncertainty			+/-3.52							
			U	-3.12	pCi/L						
Lead-210	Uncertainty			+/-8.98							
			U	-63.8	pCi/L						
Lead-212	Uncertainty			+/-92.7							
			U	-1.01	pCi/L						
Lead-214	Uncertainty			+/-9.79							
			U	-0.859	pCi/L						
Manganese-54	Uncertainty			+/-7.67							
			U	-1.31	pCi/L						
Mercury-203	Uncertainty			+/-4.03							
			U	2.57	pCi/L						
Neodymium-147	Uncertainty			+/-3.83							
			U	-1.54	pCi/L						
Neptunium-239	Uncertainty			+/-51.2							
			U	-6.22	pCi/L						
Niobium-94	Uncertainty			+/-24.3							
			U	-2.9	pCi/L						
Niobium-95	Uncertainty			+/-4.35							
			U	2.67	pCi/L						
Potassium-40	Uncertainty			+/-4.60							
			U	17.8	pCi/L						
Promethium-144	Uncertainty			+/-60.9							
			U	1.62	pCi/L						
Promethium-146	Uncertainty			+/-5.37							
			U	-2.57	pCi/L						
Radium-228	Uncertainty			+/-4.56							
			U	9.17	pCi/L						
Ruthenium-106	Uncertainty			+/-19.7							
			U	-28.8	pCi/L						
	Uncertainty			+/-51.0							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Silver-110m			U	1.05	pCi/L						
	Uncertainty			+/-3.88							
Sodium-22			U	-0.775	pCi/L				MJH1	08/04/14	16:17
	Uncertainty			+/-4.45							
Thallium-208			U	-1.86	pCi/L						
	Uncertainty			+/-5.67							
Thorium-230			U	-3100	pCi/L						
	Uncertainty			+/-589							
Thorium-234			U	-31.2	pCi/L						
	Uncertainty			+/-84.5							
Tin-113			U	1.54	pCi/L						
	Uncertainty			+/-4.49							
Uranium-235			UI	0.00	pCi/L						
	Uncertainty			+/-32.4							
Uranium-238			U	-31.2	pCi/L						
	Uncertainty			+/-84.5							
Yttrium-88			U	-0.073	pCi/L						
	Uncertainty			+/-3.69							
Zinc-65			U	0.455	pCi/L						
	Uncertainty			+/-8.14							
Zirconium-95			U	-8.04	pCi/L						
	Uncertainty			+/-7.78							
<b>Rad Gas Flow</b>											
Batch	1406420										
QC1203135088	352805003	DUP									
Alpha			7.58	6.22	pCi/L	19.7		(0% - 100%)	JXH3	08/11/14	14:44
	Uncertainty		+/-4.70	+/-3.69							
Beta			147	146	pCi/L	0.661		(0%-20%)			
	Uncertainty		+/-6.68	+/-7.84							
QC1203135091	LCS										
Alpha			123	134	pCi/L		108	(75%-125%)		08/12/14	09:41
	Uncertainty			+/-12.3							
Beta			451	518	pCi/L		115	(75%-125%)			
	Uncertainty			+/-18.3							
QC1203135087	MB										
Alpha			U	0.616	pCi/L					08/12/14	09:41
	Uncertainty			+/-1.65							
Beta			U	0.436	pCi/L						
	Uncertainty			+/-1.85							
QC1203135089	352805003	MS									
Alpha			494	577	pCi/L		115	(75%-125%)		08/11/14	14:45
	Uncertainty		+/-4.70	+/-65.7							
Beta			1800	2100	pCi/L		108	(75%-125%)			
	Uncertainty		+/-6.68	+/-80.8							
QC1203135090	352805003	MSD									

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1406420										
Alpha	494	7.58		556	pCi/L	3.65	111	(0%-20%)		08/11/14	14:44
	Uncertainty	+/-4.70		+/-62.7							
Beta	1800	147		2350	pCi/L	11.5	122	(0%-20%)	JXH3		
	Uncertainty	+/-6.68		+/-80.6							
Batch	1406421										
QC1203135097	352805023	DUP									
Alpha		7.17		5.89	pCi/L	19.6		(0% - 100%)	JXH3	08/12/14	08:49
	Uncertainty	+/-4.11		+/-3.94							
Beta		17.4		17.9	pCi/L	3.13		(0% - 100%)			
	Uncertainty	+/-3.93		+/-3.98							
QC1203135100	LCS										
Alpha	123			125	pCi/L		101	(75%-125%)		08/12/14	08:49
	Uncertainty			+/-12.2							
Beta	451			488	pCi/L		108	(75%-125%)			
	Uncertainty			+/-17.9							
QC1203135096	MB										
Alpha			U	-0.441	pCi/L					08/12/14	08:46
	Uncertainty			+/-1.22							
Beta			U	0.518	pCi/L						
	Uncertainty			+/-1.93							
QC1203135098	352805023	MS									
Alpha	494	7.17		564	pCi/L		113	(75%-125%)		08/12/14	12:51
	Uncertainty	+/-4.11		+/-56.6							
Beta	1800	17.4		2010	pCi/L		110	(75%-125%)			
	Uncertainty	+/-3.93		+/-73.2							
QC1203135099	352805023	MSD									
Alpha	494	7.17		562	pCi/L	0.430	112	(0%-20%)		08/12/14	12:51
	Uncertainty	+/-4.11		+/-54.8							
Beta	1800	17.4		2180	pCi/L	8.28	120	(0%-20%)			
	Uncertainty	+/-3.93		+/-75.1							
<b>Rad Liquid Scintillation</b>											
Batch	1407033										
QC1203136544	352805001	DUP									
Technetium-99	U	78.0	U	64.4	pCi/L	N/A			N/AMYM1	08/10/14	12:58
	Uncertainty	+/-92.4		+/-88.9							
QC1203136545	LCS										
Technetium-99	4340			3670	pCi/L		84.4	(75%-125%)		08/10/14	12:26
	Uncertainty			+/-205							
QC1203136543	MB										
Technetium-99			U	23.0	pCi/L					08/10/14	12:42
	Uncertainty			+/-85.9							
Batch	1407037										
QC1203136547	352805015	DUP									
Technetium-99	U	78.2	U	48.4	pCi/L	N/A			N/AMYM1	08/10/14	15:49
	Uncertainty	+/-115		+/-116							
QC1203136548	LCS										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1407037										
Technetium-99	4340			3960	pCi/L		91.2	(75%-125%)		08/10/14	16:06
	Uncertainty			+/-233							
QC1203136546	MB										
Technetium-99			U	82.7	pCi/L				MYM1	08/10/14	15:32
	Uncertainty			+/-116							

### 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 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, 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

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## QC Summary

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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.



**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 20 August 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-14
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



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Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

SC Dept. of Health & Environmental Control  
Bureau of Water  
Attn: Bruce Crawford  
2600 Bull Street  
Columbia, South Carolina 29201

Direct tel: 803-647-3171  
Direct fax: 803-695-3964  
e-mail: logsdocj@westinghouse.com

Your ref: **Site ID # 00456**  
Our ref: LTR-RAC-15-67

cc:  
SC Dept. of Health & Environmental Control  
Bureau of Land and Waste Management  
Attn: Addie Walker  
2600 Bull Street  
Columbia, South Carolina 29201

Subject: NPDES Permit #SC0001848  
Ground Water Sampling, October 2014 through July 2015,  
Annual Report

Date: December 29, 2015

Dear Sir or Madame:

Enclosed are results from the groundwater sampling survey completed during January 2015 and July 2015, as requested by the Bureau of Water via NPDES permit #SC0001848. In this report, we are sharing October 2014 and April 2015 results as well as the required Winter and Summer 2015 results. Westinghouse is not required to sample groundwater quarterly, but we do so in order to have the benefit of more data points.

NPDES required wells W-26, W-41, W-48, and RW-2 were sampled on October 6, 2014, January 12, 2015, April 9, 2015, and on July 10, 2015, for volatile and semi-volatile organic compounds by Shealy Environmental Services, by purging three casing volumes using a Teflon bailer, then taking four readings to ensure parameter stabilization prior to sampling using a Grundfos pump. VOC results with the associated field data sheets are attached. The table below represents the only detected results.

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Well	Tetrachloroethene ug/L				Trichloroethene ug/L			
	Oct-14	Jan-15	Apr-15	Jul-15	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	100	110	140	120	5.4	6.3	12	8.9
W41	190	190	130	140	29	37	21	21
W48	120	140	170	170	0	4.0	5.5	7.7

Well	cis-1,2-Dichloroethene ug/L			
	Oct-14	Jan-15	Apr-15	Jul-15
W26	0	1.1	0	1.0
W41	0	1.2	0	0
W48	5.5	5.4	7.4	6.1

The Westinghouse technician sampled the remaining NPDES required wells, during October 2014, January, April, and July 2015, by purging three casing volumes using a Teflon bailer, then sampling by also using the dedicated bailer.

Analyses for ammonia, fluoride, pH and conductivity are completed by the Westinghouse chemical laboratory, while the Nitrate parameter is analyzed by Shealy Environmental Services. Radiological results for Tritium are analyzed by GEL. See the tables below for results.



Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

Depth to Water pre-baling (feet)				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	18.4	18.4	18.3	18.1
W7	12.3	11.7	11.3	11.7
W10	16.7	16.6	15.7	16.2
W13R	13.1	12.7	11.6	12.1
W15	12.9	12.4	11.9	12.6
W16	4.1	4.1	3.4	3.9
W18	12.4	11.9	11.5	11.7
W22	11.8	10.8	10.3	10.7
W24	13.3	13.3	9.1	11.4
W26	26.2	26.2	26.3	25.7
W29	12.3	12.1	11.4	11.5
W30	12.7	12.5	11.8	11.8
W32	19.7	19.2	18.7	19.1
W33	16.1	16.0	15.5	15.7
W39	16.6	16.3	15.7	16.1
W41	15.9	15.8	15.6	15.5
W43	16.2	14.6	14.3	15.4
W44	19.2	19.1	18.7	18.9
W47	27.1	26.9	26.1	26.8
W48	27.1	27.1	26.2	26.8

Tritium pCi/L				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	0.00	21.2	57.8	0.00
W7	176	115	49.5	0.00
W10	2.23	50.6	115	0.00
W13R	113.7	336	164	0.00
W15	272	81.7	0.00	0.00
W16	0.00	337	96.2	0.00
W18	159	257	0.00	0.00
W22	0.00	175	0.00	0.00
W24	226	164	0.00	0.00
W26	34.3	4.07	18.6	0.00
W29	0.00	0.00	68.9	0.00
W30	0.00	21.6	0.00	0.00
W32	0.00	0.00	0.00	0.00
W33	0.00	109	0.00	38.6
W39	0.00	20.2	99.8	0.00
W41	0.00	0.00	0.00	0.00
W43	0.00	0.00	0.00	0.00
W44	0.00	0.00	29.9	0.00
W47	0.00	40.5	0.00	135
W48	32.1	0.00	0.00	96.5

Conductivity umho/cm				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	345	318	256	264
W7	1927	2400	2730	2970
W10	912	822	825	968
W13R	814	823	845	837
W15	432	421	432	437
W16	336	319	325	301
W18	5380	5520	5880	5930
W22	2720	907	992	1333
W24	61.3	61.0	59.2	58.5
W26	195.7	195.7	176.2	200.0
W29	837	880	821	844
W30	763	928	685	862
W32	1465	1504	1606	1815
W33	165.9	154.4	146.3	144.8
W39	1188	1129	951	779
W41	592	530	530	552
W43	109.1	109.1	124.4	114.2
W44	101.3	109.7	101.1	96.2
W47	535	537	522	586
W48	128.6	111.7	111.7	119.6

pH				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	4.43	4.56	4.60	4.69
W7	7.16	6.99	6.84	7.09
W10	5.60	5.24	5.55	5.92
W13R	6.51	6.52	6.45	6.59
W15	6.37	6.34	6.33	6.57
W16	6.22	6.22	6.23	6.25
W18	7.58	7.32	7.09	7.23
W22	5.26	4.90	4.61	5.49
W24	5.48	5.61	5.56	5.72
W26	5.76	6.10	5.69	6.00
W29	7.02	7.14	7.06	7.32
W30	6.66	6.53	6.66	6.73
W32	7.00	7.08	6.70	7.04
W33	5.62	5.66	5.66	5.85
W39	5.35	5.41	5.44	5.48
W41	5.61	5.99	5.90	5.95
W43	5.41	5.58	5.44	5.60
W44	5.31	5.35	5.40	5.65
W47	6.22	6.10	6.05	6.10
W48	5.66	5.98	5.77	5.87



Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
WRW-2	October	<0.500	<1.00	33	4.050	15.500
WRW-2	January	<0.500	<1.00	30.00	1.150	11.500
WRW-2	April	<0.500	<1.00	19.00	0.000	6.310
WRW-2	July	<0.500	<1.00	21	0.000	6.580
W7	October	7.50	57.0	200.00	5.890	116.000
W7	January	7.70	54.40	240.00	6.840	140.000
W7	April	6.6	56.1	300.00	4.020	109.000
W7	July	7.3	57.1	320.00	17.500	119.000
W10	October	3.31	5.03	86.00	4.620	83.400
W10	January	3.65	2.40	75.00	4.170	91.300
W10	April	2.7	4.4	66.00	1.920	92.700
W10	July	2.96	8.59	85.00	7.680	230.000
W13	October	10.00	47.45	30.50	4.930	84.900
W13	January	10.90	44.00	30.00	4.640	116.000
W13	April	10.70	47.80	33.00	0.805	146.000
W13	July	10.70	49.10	30.00	1.740	63.900
W15	October	2.17	13.1	24.00	8.970	242.000
W15	January	2.22	10.10	12.00	5.340	207.000
W15	April	2.16	6.35	26.00	3.050	171.000
W15	July	2.4	12.6	24.00	4.120	209.000
W16	October	8.6	17.3	2.90	0.000	17.600
W16	January	7.50	12.60	2.70	3.990	19.600
W16	April	7.2	10.2	2.70	1.160	14.100
W16	July	9.55	16.2	2.60	3.590	15.700
W18	October	7.40	141.0	680.00	10.200	167.000
W18	January	6.55	107.00	670.00	21.200	214.000
W18	April	6.2	99.6	720.00	11.700	179.000
W18	July	6.4	126.0	740.00	16.600	188.000





Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
W22	October	9.80	72.9	240.00	10.500	82.300
W22	January	5.50	26.10	64.00	7.250	48.100
W22	April	6.25	21.9	150.00	2.100	37.400
W22	July	6.6	63.1	170.00	5.750	42.500
W24	October	<0.500	<1.00	0.06	0.000	2.490
W24	January	<0.500	<1.00	0.06	1.080	2.530
W24	April	<0.500	<1.00	0.05	0.763	13.000
W24	July	<0.500	<1.00	0.02	0.712	1.970
W26	October	1.77	<1.00	3.30	0.000	9.210
W26	January	1.83	<1.00	2.90	0.000	11.600
W26	April	1.6	<1.00	2.90	0.569	0.000
W26	July	1.82	<1.00	2.70	1.120	12.500
W29	October	6.05	15.3	72.00	1.540	10.800
W29	January	5.75	16.00	66.00	4.920	11.000
W29	April	6.3	17.9	64.00	5.360	10.200
W29	July	6.95	25.2	58.00	6.090	8.790
W30	October	11.5	<1.00	46.00	44.600	46.100
W30	January	11.30	1.32	78.00	24.300	34.400
W30	April	10.8	<1.00	42.00	24.300	36.000
W30	July	9.65	1.29	69.00	12.200	21.700
W32	October	5.10	58.6	160.00	3.510	232.000
W32	January	4.55	54.40	150.00	6.630	251.000
W32	April	5.0	48.0	160.00	3.520	211.000
W32	July	4.66	75.1	190.00	8.080	201.000
W33	October	<0.500	<1.00	10.00	0.000	5.260
W33	January	<0.500	<1.00	7.90	1.860	2.830
W33	April	<0.500	<1.00	6.90	0.000	2.000
W33	July	<0.500	<1.00	7.50	1.990	5.260



Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
W39	October	<0.500	<1.00	130.00	4.780	25.500
W39	January	<0.500	<1.00	120.00	3.670	28.100
W39	April	<0.500	<1.00	94.00	4.340	22.600
W39	July	<0.500	<1.00	6.80	3.230	13.300
W41	October	<0.500	<1.00	62.00	1.310	17.300
W41	January	<0.500	<1.00	56.00	4.020	22.000
W41	April	<0.500	<1.00	51.00	0.000	17.600
W41	July	<0.500	<1.00	54.00	6.770	22.200
W43	October	<0.500	<1.00	5.40	0.000	3.080
W43	January	<0.500	<1.00	6.40	0.000	4.360
W43	April	<0.500	<1.00	7.00	0.000	3.670
W43	July	<0.500	<1.00	74.00	0.462	7.500
W44	October	<0.500	<1.00	3.80	0.000	3.110
W44	January	<0.500	<1.00	4.50	0.659	2.470
W44	April	<0.500	<1.00	3.70	4.440	4.150
W44	July	<0.500	<1.00	2.50	1.400	0.000
W47	October	5.25	18.6	27.00	3.950	74.700
W47	January	4.92	18.30	34.00	0.672	90.200
W47	April	5.2	15.0	31.00	2.070	74.600
W47	July	5.35	18.9	36.00	2.460	80.800
W48	October	<0.500	<1.00	4.50	0.000	8.450
W48	January	<0.500	<1.00	2.30	1.640	7.150
W48	April	<0.500	<1.00	3.20	2.440	11.400
W48	July	<0.500	<1.00	3.40	1.910	6.430

Gamma results (fission and activation products) are attached, as reported by General Engineering Laboratories (GEL).





Page 7 of 7  
Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

Please contact me at (803) 647-3171 if you have any questions regarding these results.

Sincerely,

WESTINGHOUSE ELECTRIC COMPANY LLC

A handwritten signature in black ink, appearing to read 'C. Logsdon'.

Cynthia J. Logsdon  
Principal Environmental Engineer  
Environment, Health & Safety  
Columbia Fuel Fabrication Facility, Westinghouse Electric Company

*Enclosures on disk/*

- a) Site location map, topographic*
- b) Monitoring well location map, 647F01CV01.01*
- c) Shealy Environmental Services lab reports, VOC/SVOC results and bench sheets*
- d) Shealy Environmental Services lab reports, Nitrate results*
- e) GEL lab reports, Gamma Spectroscopy (Fission & Activation Products) results*
- f) GEL lab reports, Tritium results*
- g) Westinghouse Electric Company lab reports, pH, Ammonia, Fluoride and Conductivity results*
- h) Westinghouse Electric Company, in field elevation and depth to water forms*
- i) Isoconcentration maps for the parameters monitored for groundwater MCL exceedances, including Fluoride, Nitrate, Gross Alpha, and Gross Beta, AECOM*
- j) Water table surface map, AECOM*
- k) Contaminant trend plots, AECOM*
- l) Discussion of the water quality trends over the last two years, AECOM*
- m) PG signature, AECOM*

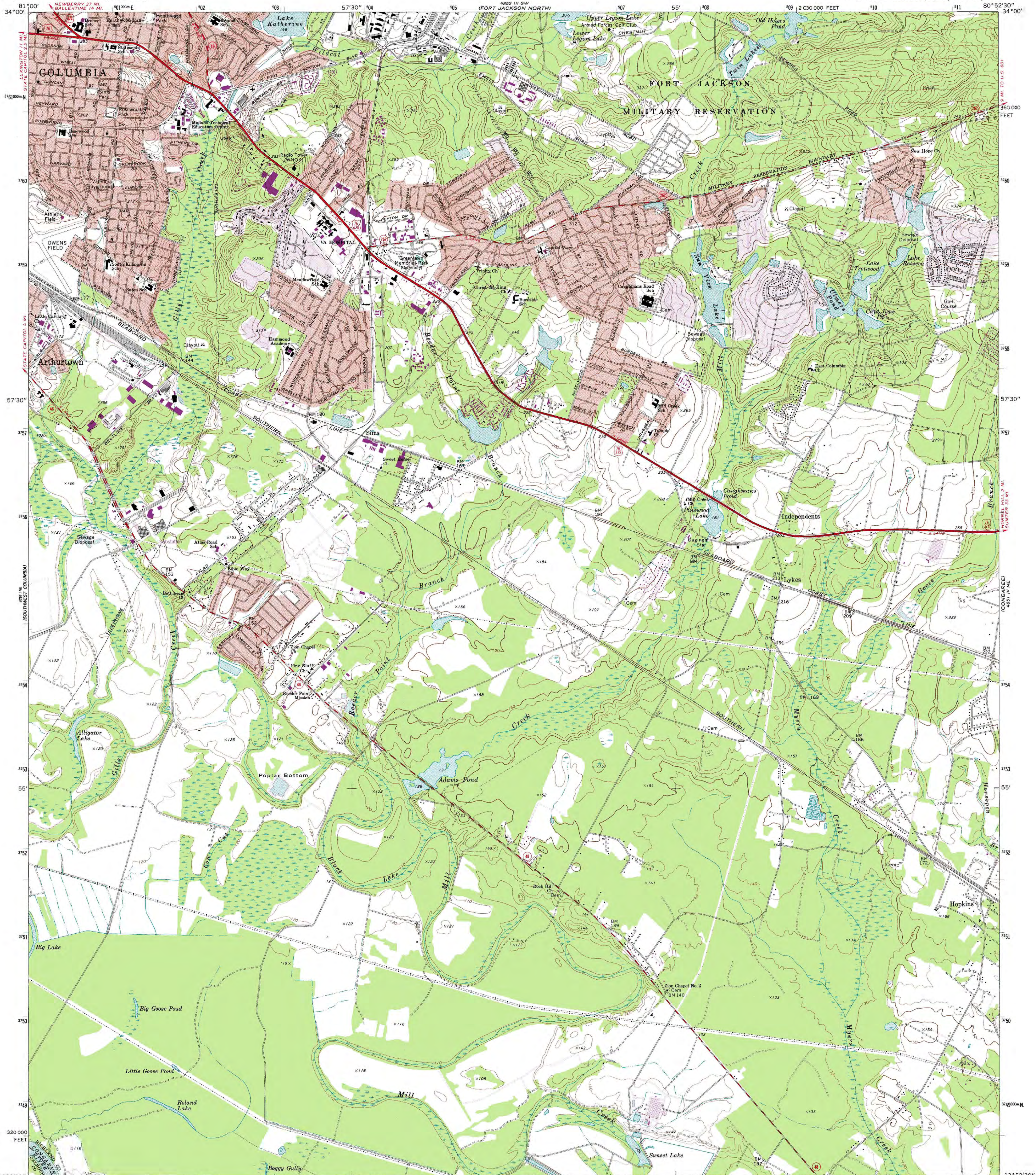
**Enclosure a)**

**Site Location Map, Topographic**



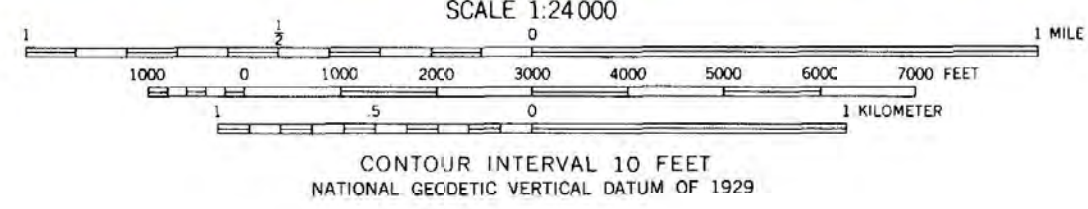
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

FORT JACKSON SOUTH QUADRANGLE  
SOUTH CAROLINA  
7.5 MINUTE SERIES (TOPOGRAPHIC)



Maped by the Army Map Service  
Edited and published by the Geological Survey  
Control by USGS, NOS/NOAA, USCE, and Tennessee  
Valley Authority  
Topography by photogrammetric methods from aerial  
photographs taken 1952. Field checked 1953  
Revised by the Geological Survey from aerial photographs  
taken 1971. Field checked 1972  
Polyconic projection. 10,000-foot grid ticks based on South  
Carolina coordinate system, north zone. 1000-meter  
Universal Transverse Mercator grid ticks, zone 17, shown  
in blue. 1927 North American Datum  
The difference between 1927 North American Datum and North American  
Datum of 1983 (NAD 83) for 7.5-minute intersections is given in USGS  
Bulletin 1875. The NAD 83 is shown by dashed corner ticks  
Fine red dashed lines indicate selected fence and field lines where  
generally visible on aerial photographs. This information is unchecked  
Red tint indicates areas in which only landmark buildings are shown  
There may be private inholdings within the boundaries  
of the National or State reservations shown on this map

Revisions shown in purple and woodland compiled by  
the Geological Survey from aerial photographs taken  
1980 and other sources. This information not field  
checked. Map edited 1982  
Purple tint indicates extension of urban areas



ROAD CLASSIFICATION  
Primary highway, hard surface  
Secondary highway, hard surface  
Interstate Route  
Light-duty road, hard or improved surface  
Unimproved road  
U. S. Route  
State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY  
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Map photorevised 1987  
No major culture or drainage changes observed

FORT JACKSON SOUTH, S. C.  
33080-H8-TF-024  
PHOTOINSPECTED 1987  
PHOTOREVISED 1982  
DMA 4851 IV NW—SERIES V846



**Enclosure b)**

**Monitoring Well Location Map**



**Enclosure c)**

**Shealy Environmental Services Lab Reports  
VOC/SVOV Results and Bench Sheets**

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PJ06010  
Date Completed: 10/14/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ06010\*



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ06010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	W-26	Aqueous	10/06/2014 1042	10/06/2014
002	MW-41	Aqueous	10/06/2014 1022	10/06/2014
003	W-48	Aqueous	10/06/2014 1105	10/06/2014
004	RW-2	Aqueous	10/06/2014 1005	10/06/2014

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ06010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	MW-41	Aqueous	Tetrachloroethene	8260B	190		ug/L	12
002	MW-41	Aqueous	Trichloroethene	8260B	29		ug/L	12
003	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.5		ug/L	16
003	W-48	Aqueous	Tetrachloroethene	8260B	120		ug/L	17
004	RW-2	Aqueous	Tetrachloroethene	8260B	100		ug/L	22
004	RW-2	Aqueous	Trichloroethene	8260B	5.4		ug/L	22

(6 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-001
Description: W-26	Matrix: Aqueous
Date Sampled: 10/06/2014 1042	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1040	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1040	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1040	BTF		
1		(Water level )	1	10/06/2014 1040	BTF		
1		(Well Depth)	1	10/06/2014 1040	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.59			su	1
Specific Conductance @ 25° C - Field		120.1	169		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.0			° C	1
Water level depth from top of casing		No Method	26.22			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/10/2014 1934	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/10/2014 1934	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-001

Description: W-26

Matrix: Aqueous

Date Sampled: 10/06/2014 1042

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1257	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-001
Description: W-26	Matrix: Aqueous
Date Sampled: 10/06/2014 1042	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1257	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		94	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		78	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		81	28-128
Terphenyl-d14		61	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/06/2014 1022

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	10/06/2014 1022	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1022	BTF		
1	(Temperature )	SM 2550B-2010	1	10/06/2014 1022	BTF		
1		(Water level )	1	10/06/2014 1022	BTF		
1		(Well Depth)	1	10/06/2014 1022	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.37			su	1
Specific Conductance @ 25° C - Field		120.1	532		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.0			° C	1
Water level depth from top of casing		No Method	15.86			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 1957	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 1957	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	190		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	29		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/06/2014 1022

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1655	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/06/2014 1022

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1655	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		92	41-144
2-Fluorobiphenyl		97	37-129
2-Fluorophenol		74	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		84	28-128
Terphenyl-d14		79	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-003
Description: W-48	Matrix: Aqueous
Date Sampled: 10/06/2014 1105	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1105	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1105	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1105	BTF		
1		(Water level )	1	10/06/2014 1105	BTF		
1		(Well Depth)	1	10/06/2014 1105	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.54			su	1
Specific Conductance @ 25° C - Field		120.1	96.6		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.5			° C	1
Water level depth from top of casing		No Method	16.82			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2019	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.5		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2019	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-003

Description: W-48

Matrix: Aqueous

Date Sampled: 10/06/2014 1105

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1722	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-003

Description: W-48

Matrix: Aqueous

Date Sampled: 10/06/2014 1105

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1722	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		89	37-129
2-Fluorophenol		66	24-127
Nitrobenzene-d5		87	38-127
Phenol-d5		75	28-128
Terphenyl-d14		85	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	10/06/2014 1005	BTF		
1	(Specific Con)	120.1	1	10/06/2014 1005	BTF		
1	(Temperature )	SM 2550B-2010	1	10/06/2014 1005	BTF		
1	(Water level )		1	10/06/2014 1005	BTF		
1	(Well Depth)		1	10/06/2014 1005	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.27			su	1
Specific Conductance @ 25° C - Field		120.1	309		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.2			° C	1
Water level depth from top of casing		No Method	18.40			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/06/2014 1005							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2042	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/06/2014 1005							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2042	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	100		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.4		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/13/2014 1339	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

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ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/13/2014 1339	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		96	37-129
2-Fluorophenol		79	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		83	28-128
Terphenyl-d14		58	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
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Number 40054

[illegible]

**DISTRIBUTION:** WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 1/10-6-14 Lot #: PJ04010

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.2/12.0</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>-10.4</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		October 6, 2014		Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel		BTF, RA		Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name		Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: (Y) - N
Well ID #		N-26		Well Yield: Low - Mod. - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) =		32.00			
Depth To Groundwater (DGW) =		26.22			
Length Of Water Column (LWC) =		5.78			
1 Casing Volume (OCV) = LWC x		.163		= 0.94 gal.	
3 Casing Volumes =		2.83		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation		(TB) SSB WW GP Other			
Method of Sample Collection		(TB) SSB WW GP Other			

**Evacuation and Collection Methods**

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)				Well Sample Time: 1042	
TIME (24 HOUR SYSTEM)				Remarks:	
pH (SU)					
WATER TEMPERATURE (°C.)					
SPECIFIC CONDUCTIVITY (UMHOS/CM)					
TURBIDITY (SUBJECTIVE)*					
ODOR (SUBJECTIVE)**					

<del>1035</del> 1st	.94	1.88	2.82		
1035	1037	1039	1040		
5.40	5.44	5.44	5.59		
18.3	18.1	18.1	18.0		
167.3	173.4	171.2	169.2		
5.42	23.9	27.0	22.9		
1	1	1	1		

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 6, 2014		Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - Metal - No	Locking Cap: (Y) N
Facility Name	Westinghouse		Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) N
Well ID #	MW-41		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	27.05			
Depth To Groundwater (DGW) =	15.86			
Length Of Water Column (LWC) =	11.19			
1 Casing Volume (OCV) = LWC x	.163 = 1.8		gal.	
3 Casing Volumes =	5.47		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =			gal.	
Method of Well Evacuation	(TB) SSB WW GP Other			
Method of Sample Collection	(TB) SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Granfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1st	1.8	3.6	5.4	Well Sample Time: 1022
TIME (24 HOUR SYSTEM)	1015	1017	1020	1022	Remarks:
pH (SU)	4.90	5.16	5.27	5.37	
WATER TEMPERATURE (°C.)	19.4	19.3	19.3	19.0	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	524	545	534	532	
TURBIDITY (SUBJECTIVE)*	3.74	33.4	32.7	39.2	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 6, 2014		Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	BTF, RA		Guard Pipe: PVC (Metal) - No	Locking Cap: Y - N
Facility Name	Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: Y (N)
Well ID #	N-48		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	44.00			
Depth To Groundwater (DGW) =	27.18			
Length Of Water Column (LWC) =	16.82			
1 Casing Volume (OCV) = LWC x	.1052 = 10.97			
3 Casing Volumes =	32.90			
Total Volume of Water Removed =	gal. = Standard Evacuation Volume			
Method of Well Evacuation	N/A (TB) SSB WW GP Other			
Method of Sample Collection	TB SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	10.97	21.94	32.91			
1055	1100	1105				
5.57	5.26	5.54				
17.5	18.3	18.5				
106.9	103.6	96.6				
1100	340.0	22.7				

Well Sample Time: 1105

Remarks:

Dry At 21

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 6, 2014		Casing Diameter: 2 inches	Casing Material: <u>PVC</u> - Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - <u>Metal</u> - No	Locking Cap: <u>Y</u> - N
Facility Name	Westinghouse		Protective Abutment: Y <u>N</u>	Integrity Satisfactory: <u>Y</u> - N
Well ID #	RW-2		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	31.25			
Depth To Groundwater (DGW) =	18.40			
Length Of Water Column (LWC) =	12.85			
1 Casing Volume (OCV) = LWC x	0.163 = 2.1			
3 Casing Volumes =	6.3			
Total Volume of Water Removed =	gal. = Standard Evacuation Volume			
Method of Well Evacuation	<u>TB</u> SSB WW GP Other			
Method of Sample Collection	<u>TB</u> SSB WW GP Other			

**Evacuation and Collection Methods**

TB - Tefton Bailer  
SSB - Stainless Steel Bailer  
WW - Well Wizard  
GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
2" = 0.163  
3" = 0.367  
4" = 0.652

5" = 1.02  
6" = 1.47  
7" = 2.00  
8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
214	0955					
1	2.1	4.2	6.7			
1055	1000	1003	1005			
4.60	4.37	4.29	4.27			
19.0	18.9	19.2	19.2			
293.9	311.7	303.7	309.3			
5.82	20.3	24.7	40.2			
1	1	1	1			

Well Sample Time: 1005

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QA12017  
Date Completed: 01/19/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA12017 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA12017

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA12017

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	W-26	Aqueous	01/12/2015 1012	01/12/2015
002	MW-41	Aqueous	01/12/2015 1052	01/12/2015
003	W-48	Aqueous	01/12/2015 0945	01/12/2015
004	RW-2	Aqueous	01/12/2015 1034	01/12/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA12017

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.1		ug/L	6
002	MW-41	Aqueous	cis-1,2-Dichloroethene	8260B	1.2		ug/L	11
002	MW-41	Aqueous	Tetrachloroethene	8260B	190		ug/L	12
002	MW-41	Aqueous	Trichloroethene	8260B	37		ug/L	12
003	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.4		ug/L	16
003	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	17
003	W-48	Aqueous	Trichloroethene	8260B	4.0		ug/L	17
004	RW-2	Aqueous	Tetrachloroethene	8260B	110		ug/L	22
004	RW-2	Aqueous	Trichloroethene	8260B	6.3		ug/L	22

(9 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QA12017-001
Description: W-26	Matrix: Aqueous
Date Sampled: 01/12/2015 1012	
Date Received: 01/12/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 1010	BTF		
1		(Specific Con) 120.1	1	01/12/2015 1010	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 1010	BTF		
1		(Water level )	1	01/12/2015 1010	BTF		
1		(Well Depth)	1	01/12/2015 1010	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.79			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.8			° C	1
Water level depth from top of casing		No Method	26.19			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/12/2015 1012							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1405	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.1		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/12/2015 1012							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1405	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-001

Description: W-26

Matrix: Aqueous

Date Sampled: 01/12/2015 1012

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1905	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.2	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.2	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.2	ug/L	2
Anthracene	120-12-7	8270D	ND		5.2	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.2	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.2	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.2	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.2	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.2	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.2	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.2	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.2	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.2	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.2	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.2	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.2	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.2	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.2	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.2	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.2	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.2	ug/L	2
Chrysene	218-01-9	8270D	ND		5.2	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.2	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.2	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.2	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.2	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.2	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.2	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.2	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.2	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.2	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.2	ug/L	2
Fluorene	86-73-7	8270D	ND		5.2	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.2	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.2	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-001

Description: W-26

Matrix: Aqueous

Date Sampled: 01/12/2015 1012

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1905	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.2	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.2	ug/L	2
Isophorone	78-59-1	8270D	ND		5.2	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.2	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.2	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.2	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.2	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.2	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.2	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.2	ug/L	2
Phenol	108-95-2	8270D	ND		5.2	ug/L	2
Pyrene	129-00-0	8270D	ND		5.2	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.2	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.2	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		88	41-144
2-Fluorobiphenyl		98	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		94	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 9 of 24

Level 1 Report v2.1

## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA12017-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/12/2015 1052

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 1051	BTF		
1		(Specific Con) 120.1	1	01/12/2015 1051	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 1051	BTF		
1		(Water level )	1	01/12/2015 1051	BTF		
1		(Well Depth)	1	01/12/2015 1051	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.54			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	16.6			° C	1
Water level depth from top of casing		No Method	15.75			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	01/15/2015 1717	EH1		65476
2	5030B	8260B	1	01/16/2015 2232	PMM2		65592

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	2
Acetonitrile	75-05-8	8260B	ND		20	ug/L	2
Acrolein	107-02-8	8260B	ND		20	ug/L	2
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	2
Benzene	71-43-2	8260B	ND		1.0	ug/L	2
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	2
Bromoform	75-25-2	8260B	ND		1.0	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	2
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	2
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	2
Chloroform	67-66-3	8260B	ND		1.0	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	2
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	2
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	2
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	1.2		1.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	2
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	2
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	2
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	2
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	ug/L	2
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	2
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	2

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	01/15/2015 1717	EH1		65476
2	5030B	8260B	1	01/16/2015 2232	PMM2		65592

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	2
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	2
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	ug/L	2
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	2
Tetrachloroethene	127-18-4	8260B	190		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	2
Trichloroethene	79-01-6	8260B	37		1.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	2
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	2
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130		108	70-130
Bromofluorobenzene		108	70-130		98	70-130
Toluene-d8		102	70-130		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/12/2015 1052

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1929	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/12/2015 1052

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1929	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		77	41-144
2-Fluorobiphenyl		98	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		94	28-128
Terphenyl-d14		98	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QA12017-003
Description: W-48	Matrix: Aqueous
Date Sampled: 01/12/2015 0945	
Date Received: 01/12/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 0944	BTF		
1		(Specific Con) 120.1	1	01/12/2015 0944	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 0944	BTF		
1		(Water level )	1	01/12/2015 0944	BTF		
1		(Well Depth)	1	01/12/2015 0944	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.69			su	1
Specific Conductance @ 25° C - Field		120.1	123		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.1			° C	1
Water level depth from top of casing		No Method	27.09			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1509	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.4		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1509	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	4.0		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-003

Description: W-48

Matrix: Aqueous

Date Sampled: 01/12/2015 0945

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1952	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-003

Description: W-48

Matrix: Aqueous

Date Sampled: 01/12/2015 0945

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1952	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		77	41-144
2-Fluorobiphenyl		101	37-129
2-Fluorophenol		96	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		97	28-128
Terphenyl-d14		103	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA12017-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/12/2015 1034

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	01/12/2015 1032	BTF		
1	(Specific Con)	120.1	1	01/12/2015 1032	BTF		
1	(Temperature )	SM 2550B-2010	1	01/12/2015 1032	BTF		
1	(Water level )		1	01/12/2015 1032	BTF		
1	(Well Depth)		1	01/12/2015 1032	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.41			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.4			° C	1
Water level depth from top of casing		No Method	18.42			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1427	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1427	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	110		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	6.3		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/12/2015 1034

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 2015	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/12/2015 1034

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 2015	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		80	41-144
2-Fluorobiphenyl		104	37-129
2-Fluorophenol		96	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		98	28-128
Terphenyl-d14		99	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

### ***Chain of Custody Record***

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 44431

[illegible]

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-40-133 Effective Date: 06-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 11-12-15 Lot #: QA1207

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.1</u> <u>12.0</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>-0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/H&M/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>11-12-15</u>		

Comments:

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 12, 2015		Casing Diameter:	2 inches	Casing Material:	PVC - Metal
Field Personnel		BTF, RA		Guard Pipe:	PVC - Metal - No	Looking Cap:	(Y) - N
Facility Name		Westinghouse		Protective Abutment:	Y - (N)	Integrity Satisfactory:	(Y) - N
Well ID #		W-210		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		210.22 - 32.00 RNA 01-12-15					
Depth To Groundwater (DGW) =		210.19					
Length Of Water Column (LWC) =		5.81					
1 Casing Volume (OCV) = LWC x		.163		=		.95 gal.	
3 Casing Volumes =		2.84		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		(TB) SSB WW GP Other					
Method of Sample Collection		(TB) SSB WW GP Other					

**Evacuation and Collection Methods**

TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	.95	1.9	2.85			
1004	1006	1008	1010			
5.69	5.72	5.79	5.79			
16.0	17.4	17.8	17.8			
0.2	0.2	0.2	0.2			
105	41.3	30.6	28.7			
1	1	1	1			

Well Sample Time: 1012

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 12, 2015		Casing Diameter:	inches	Casing Material:	PVC - Metal
Field Personnel		BTF, RA		Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Facility Name		Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #		MW-41		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		27.05					
Depth To Groundwater (DGW) =		15.75					
Length Of Water Column (LWC) =		11.3					
1 Casing Volume (OCV) = LWC x		0.143		= 1.84		gal.	
3 Casing Volumes =		5.52		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation	TB	SSB	WW	GP	Other		
Method of Sample Collection	TB	SSB	WW	GP	Other		

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.84	3.08	5.52			
1043	1040	1049	1051			
5.50	5.59	5.52	5.54			
15.2	16.2	16.2	16.6			
0.5	0.5	0.5	0.5			
71000	21000	44.0	96.6			
1	1	1	1			

Well Sample Time: 1052

Remarks:

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH

\*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

RNT-12-15



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY) <b>January 12, 2015</b>		Casing Diameter: <b>4</b> inches	Casing Material: <b>PVC</b> Metal
Field Personnel <b>BTF, RA</b>		Guard Pipe: <b>PVC</b> Metal - No	Locking Cap: <b>(Y)</b> N
Facility Name <b>Westinghouse</b>		Protective Abutment: <b>Y</b> (N)	Integrity Satisfactory: <b>(Y)</b> - N
Well ID# <b>W-48</b>		Well Yield: Low - Mod. - High	
Weather Conditions		Remarks:	
Total Well Depth (TWD) = <b>44.00</b>			
Depth To Groundwater (DGW) = <b>27.09</b>			
Length Of Water Column (LWC) = <b>16.91</b>			
1 Casing Volume (OCV) = LWC x <b>.652</b> = <b>11.03</b> gal.			
3 Casing Volumes = <b>33.08</b> gal. = Standard Evacuation Volume			
Total Volume of Water Removed =			
Method of Well Evacuation	TB SSB WW <b>(GP)</b> Other		
Method of Sample Collection	<b>(TB)</b> SSB WW GP Other		

**Evacuation and Collection Methods**

TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Gruntos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11.03	22.06	33.09			
0930	0942	0944				
5.57	5:59	5.69				
15.2	17.0	18.1				
136.1417	137.3	123.0				
39.9	19.1	15.8				
1	1					

Well Sample Time: **0945**

Remarks: **Dry at 22 Gal**

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	January 12, 2015		
Field Personnel	BTF, RA		
Facility Name	Westinghouse		
Well ID #	RW-2		
Weather Conditions	Air Temperature	°C.	
Total Well Depth (TWD) =	31.25		
Depth To Groundwater (DGW) =	18.42		
Length Of Water Column (LWC) =	12.83		
1 Casing Volume (OCV) = LWC x	0.163	=	2.09 gal.
3 Casing Volumes =	6.27	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation	TB	SSB	WW GP Other
Method of Sample Collection	TB	SSB	WW GP Other

Casing Diameter:	2 inches	Casing Material:	PVC - Metal
Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Protective Abutment:	Y - N	Integrity Satisfactory:	Y N
Well Yield:	Low - Mod. - High		
Remarks:			

Evacuation and Collection Methods	Constants for Casine Diameters
TB - Tefton Bailer	1.5" = 0.092
SSB - Stainless Steel Bailer	6" = 1.47
WW - Well Wizard	3" = 0.163
GP - Grunfos Pump	7" = 2.00
	4" = 0.367
	8" = 2.61
	4" = 0.652

Field Analyses RNA 1-12-15

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**	Well Sample Time:
1st	2.1	4.2	10.32	0.3	1	1	1034
1021	1024	1028	1032	0.3	1	1	
4.57	4.41	4.42	4.41	0.3	1	1	
17.7	18.5	18.5	18.4	0.3	1	1	
0.3	0.3	0.3	0.3	0.3	1	1	
0.3	0.3	0.3	0.3	0.3	1	1	
1	1	1	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QD09062  
Date Completed: 04/15/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD09062 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	04/09/2015 0946	04/09/2015
002	W-26	Aqueous	04/09/2015 1057	04/09/2015
003	MW-41	Aqueous	04/09/2015 1009	04/09/2015
004	W-48	Aqueous	04/09/2015 1035	04/09/2015

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	140		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	12		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	130		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	21		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	7.4		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	5.5		ug/L	22

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-001		
Description: RW-2			Matrix: Aqueous		
Date Sampled: 04/09/2015 0946			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 0946	BTF		
1		(Specific Con) 120.1	1	04/09/2015 0946	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 0946	BTF		
1		(Water level )	1	04/09/2015 0946	BTF		
1		(Well Depth)	1	04/09/2015 0946	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.32			su	1
Specific Conductance @ 25° C - Field		120.1	223		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.8			° C	1
Water level depth from top of casing		No Method	18.29			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0034	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0034	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	12		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1343	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1343	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		66	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		85	24-127
Nitrobenzene-d5		91	38-127
Phenol-d5		87	28-128
Terphenyl-d14		90	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-002		
Description: W-26			Matrix: Aqueous		
Date Sampled: 04/09/2015 1057			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1057	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1057	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1057	BTF		
1		(Water level )	1	04/09/2015 1057	BTF		
1		(Well Depth)	1	04/09/2015 1057	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.49			su	1
Specific Conductance @ 25° C - Field		120.1	162		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.4			° C	1
Water level depth from top of casing		No Method	25.30			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0058	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0058	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1454	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1454	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		74	41-144
2-Fluorobiphenyl		97	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		98	38-127
Phenol-d5		94	28-128
Terphenyl-d14		98	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-003		
Description: MW-41			Matrix: Aqueous		
Date Sampled: 04/09/2015 1009			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1009	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1009	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1009	BTF		
1		(Water level )	1	04/09/2015 1009	BTF		
1		(Well Depth)	1	04/09/2015 1009	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.7			su	1
Specific Conductance @ 25° C - Field		120.1	454		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.1			° C	1
Water level depth from top of casing		No Method	15.65			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0122	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0122	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	130		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	21		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1518	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1518	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		65	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		85	24-127
Nitrobenzene-d5		91	38-127
Phenol-d5		85	28-128
Terphenyl-d14		89	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-004		
Description: W-48			Matrix: Aqueous		
Date Sampled: 04/09/2015 1035			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1035	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1035	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1035	BTF		
1		(Water level )	1	04/09/2015 1035	BTF		
1		(Well Depth)	1	04/09/2015 1035	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.57			su	1
Specific Conductance @ 25° C - Field		120.1	110		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	20.5			° C	1
Water level depth from top of casing		No Method	26.17			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0145	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	7.4		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0145	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.5		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1542	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1542	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		67	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		86	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		87	28-128
Terphenyl-d14		102	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
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Number 46126

[illegible]

Document Number: F-AO-139 Effective Date: 09-01-2014

/ OWK-Return to laboratory with Sample(s): PINK-Field/Client Copy

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KNP: 4-9-15 Lot #: QDC9062

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>120/120</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (½" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/TFM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KNP</u> Verified by: _____ Date: <u>4-9-15</u>		

Comments:

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015		Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - (Meta) - No	Locking Cap: (Y) - N
Facility Name	Westinghouse		Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) - N
Well ID #	RW-2		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		°C.	Remarks:
Total Well Depth (TWD) =	31.25			
Depth To Groundwater (DGW) =	18.29			
Length Of Water Column (LWC) =	12.96			
1 Casing Volume (OCV) = LWC x	0.163		= 2.11	gal.
3 Casing Volumes =	6.34		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =			gal.	
Method of Well Evacuation	(TB) SSB WW GP Other			
Method of Sample Collection	(TB) SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

## Field Analyses

RW-2-a-15

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	2.1	4.2	6.3	7.4		
0935	0940	0943	0946			
4.36	4.36	4.37	4.32			
18.6	18.4	17.7	17.8			
22.6	212.8	220.4	223.1			
>1000	39	24.3	31.5			
1	1	1	1			

Well Sample Time: 0946  
 Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015			Casing Diameter: <u>2</u> inches	Casing Material: <u>PVC</u> - Metal
Field Personnel	BTF, RA			Guard Pipe: <u>PVC</u> - <u>(Metal)</u> No	Looking Cap: <u>(Y)</u> - N
Facility Name	Westinghouse			Protective Abutment: Y <u>(N)</u>	Integrity Satisfactory: <u>(Y)</u> - N
Well ID #	W-210			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	32.00				
Depth To Groundwater (DGW) =	25.30				
Length Of Water Column (LWC) =	6.70				
1 Casing Volume (OCV) = LWC x	.163 = 1.09 gal.				
3 Casing Volumes =	3.27 gal. = Standard Evacuation Volume				
Total Volume of Water Removed =	3.27 gal.				
Method of Well Evacuation	<u>SSB</u> WW GP Other				
Method of Sample Collection	<u>SSB</u> WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.09	2.18	3.27			
1051	1053	1055	1057			
5.54	5.61	5.57	5.49			
20.5	19.6	19.1	19.4			
176.8	168.8	162.9	161.7			
9.98	21.1	23.4	21.4			
1	1	1	1			

Well Sample Time: 1057

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015			Casing Diameter:	inches	Casing Material:	PVC - Metal
Field Personnel	BTF, RA			Guard Pipe:	PVC - Metal - No	Looking Cap:	Y - N
Facility Name	Westinghouse			Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #	MW-41			Well Yield:	Low - Mod. - High		
Weather Conditions	Air Temperature			°C.	Remarks:		
Total Well Depth (TWD) =	27.05						
Depth To Groundwater (DGW) =	15.45						
Length Of Water Column (LWC) =	11.3						
1 Casing Volume (OCV) = LWC x	0.163 = 1.84			gal.			
3 Casing Volumes =	5.52			gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation	TB	SSB	WW	GP	Other		
Method of Sample Collection	TB	SSB	WW	GP	Other		

Evacuation and Collection Methods

TB - Teflon Bailor	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailor	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.84	5.52	18.6	459.3	80.3	1
0959	1003	1005	5.71	5.69	5.70	1
5.52	5.71	5.69	17.9	17.1		
406.4	459.3	459.5	454.4			
71000	80.3	35.5	25.2			
1	1	1				

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Well Sample Time: 1001

Remarks:



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015		Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - Metal - No	Locking Cap: Y - N
Facility Name	Westinghouse		Protective Abutment: Y - N	Integrity Satisfactory: Y - N
Well ID #	W-48		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	44.00			
Depth To Groundwater (DGW) =	20.17			
Length Of Water Column (LWC) =	17.83			
1 Casing Volume (OCV) = LWC x .652	= 11.62 gal.			
3 Casing Volumes =	34.8 gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				
Method of Well Evacuation	TB	SSB	WW	GP
Method of Sample Collection	TB	SSB	WW	GP

Evacuation and Collection Methods  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11:02	23.24	24.8			
10:24	10:29	10:35				
5.53	5.49	5.57				
20.40	20.5	20.5				
135.4	123.2	109.5				
28.5	80.1	33.1				
1	1	1				

Well Sample Time: 1035

Remarks:

Dry @ 23.24  
 RHA 4-9-15

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QG10020  
Date Completed: 07/22/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

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## Case Narrative

### Westinghouse Electric Company

Lot Number: QG10020

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QG10020

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	07/10/2015 0932	07/10/2015
002	W-26	Aqueous	07/10/2015 1010	07/10/2015
003	MW-41	Aqueous	07/10/2015 0953	07/10/2015
004	W-48	Aqueous	07/10/2015 1050	07/10/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG10020

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	120		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	8.9		ug/L	7
002	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.0		ug/L	11
003	MW-41	Aqueous	Tetrachloroethene	8260B	140		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	21		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	6.1		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	7.7		ug/L	22

(8 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 07/10/2015 0932	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 0932	BTF		
1	(Specific Con)	120.1	1	07/10/2015 0932	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 0932	BTF		
1	(Water level )		1	07/10/2015 0932	BTF		
1	(Well Depth)		1	07/10/2015 0932	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.51			su	1
Specific Conductance @ 25° C - Field		120.1	252		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	18.09			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1239	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1239	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	8.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 07/10/2015 0932

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1134	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 07/10/2015 0932

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1134	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		88	41-144
2-Fluorobiphenyl		113	37-129
2-Fluorophenol		100	24-127
Nitrobenzene-d5		113	38-127
Phenol-d5		109	28-128
Terphenyl-d14		116	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-002
Description: W-26	Matrix: Aqueous
Date Sampled: 07/10/2015 1010	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 1010	BTF		
1		(Specific Con) 120.1	1	07/10/2015 1010	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 1010	BTF		
1		(Water level )	1	07/10/2015 1010	BTF		
1		(Well Depth)	1	07/10/2015 1010	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.67			su	1
Specific Conductance @ 25° C - Field		120.1	188		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.5			° C	1
Water level depth from top of casing		No Method	25.72			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1303	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.0		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1303	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-002

Description: W-26

Matrix: Aqueous

Date Sampled: 07/10/2015 1010

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1223	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1223	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		98	41-144
2-Fluorobiphenyl		111	37-129
2-Fluorophenol		93	24-127
Nitrobenzene-d5		108	38-127
Phenol-d5		101	28-128
Terphenyl-d14		124	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 07/10/2015 0953	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 0953	BTF		
1		(Specific Con) 120.1	1	07/10/2015 0953	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 0953	BTF		
1		(Water level )	1	07/10/2015 0953	BTF		
1		(Well Depth)	1	07/10/2015 0953	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.49			su	1
Specific Conductance @ 25° C - Field		120.1	537		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.2			° C	1
Water level depth from top of casing		No Method	15.50			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1327	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1327	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	21		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 07/10/2015 0953

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1808	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1808	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		92	41-144
2-Fluorobiphenyl		113	37-129
2-Fluorophenol		107	24-127
Nitrobenzene-d5		116	38-127
Phenol-d5		115	28-128
Terphenyl-d14		123	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-004
Description: W-48	Matrix: Aqueous
Date Sampled: 07/10/2015 1050	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 1050	BTF		
1		(Specific Con) 120.1	1	07/10/2015 1050	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 1050	BTF		
1		(Water level )	1	07/10/2015 1050	BTF		
1		(Well Depth)	1	07/10/2015 1050	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.7			su	1
Specific Conductance @ 25° C - Field		120.1	106		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.3			° C	1
Water level depth from top of casing		No Method	26.80			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1351	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.1		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1351	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	7.7		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-004

Description: W-48

Matrix: Aqueous

Date Sampled: 07/10/2015 1050

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1312	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: QG10020-004
Description: W-48	Matrix: Aqueous
Date Sampled: 07/10/2015 1050	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1312	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		91	41-144
2-Fluorobiphenyl		112	37-129
2-Fluorophenol		100	24-127
Nitrobenzene-d5		111	38-127
Phenol-d5		109	28-128
Terphenyl-d14		130	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
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Number 49022

[illegible]

**DISTRIBUTION:** WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Clinic Copy

Document Number: F-AO-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mm/07/15 Lot #: 0210020

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>1373.7°C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles <input type="checkbox"/> IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0.0°C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mm</u> Verified by: _____ Date: <u>7/15/15</u>		

Comments:

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		JULY 10, 2015	
Field Personnel		BTF,RA	
Facility Name		Westinghouse	
Well ID #		RW-2	
Weather Conditions		Air Temperature	
Total Well Depth (TWD) =		31.25	
Depth To Groundwater (DGW) =		18.09	
Length Of Water Column (LWC) =		13.16	
1 Casing Volume (OCV) = LWC x		0.163 = 2.14 gal.	
3 Casing Volumes =		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation		(TB) SSB WW GP Other	
Method of Sample Collection		(TB) SSB WW GP Other	

**Evacuation and Collection Methods**  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1"	2.14	4.28	6.42	Well Sample Time: 0932
TIME (24 HOUR SYSTEM)	0919	0922	0926	0932	Remarks:
pH (SU)	5.94	5.03	4.53	4.51	
WATER TEMPERATURE (°C)	21.7	19.9	19.2	19.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	232.2	246.1	247.9	251.6	
TURBIDITY (SUBJECTIVE)*	7.6	18.4	18.7	21.6	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH      \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	JULY 10, 2015		
Field Personnel	BTF, RA		
Facility Name	Westinghouse		
Well ID #	W-26		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	32.00		
Depth To Groundwater (DGW) =	25.72		
Length Of Water Column (LWC) =	6.28		
1 Casing Volume (OCV) = LWC x 0.163	= 1.0		gal.
3 Casing Volumes =			gal.
Total Volume of Water Removed =	gal. = Standard Evacuation Volume		
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

Evacuation and Collection Methods  
TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

Constants for Casing Diameters  
1.5" = 0.092      5" = 1.02  
2" = 0.163      6" = 1.47  
3" = 0.367      7" = 2.00  
4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1'	1.0	2.0	3.0	Well Sample Time: 1010
TIME (24 HOUR SYSTEM)	1002	1006	1008	1010	Remarks:
pH (SU)	5.72	5.70	5.63	5.67	
WATER TEMPERATURE (°C.)	21.4	20.1	21.0	19.5	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	218.5	200.9	206.2	188.4	
TURBIDITY (SUBJECTIVE)*	24.6	37.3	27.0	35.4	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		JULY 10, 2015	
Field Personnel		BTF, RA	
Facility Name		Westinghouse	
Well ID # 14W-11		Air Temperature	
Weather Conditions		°C.	
Total Well Depth (TWD) = 27.65		Remarks:	
Depth To Groundwater (DGW) = 15.50		Casing Diameter: inches	
Length Of Water Column (LWC) = 11.55		Guard Pipe: PVC - Metal - No	
1 Casing Volume (OCV) = LWC x 0.167 = 1.9		Protective Abutment: Y - N	
3 Casing Volumes =		Well Yield: Low - Mod. - High	
Total Volume of Water Removed =		Integrity Satisfactory: Y - N	
Method of Well Evacuation		Casing Material: PVC - Metal	
Method of Sample Collection		Locking Cap: Y - N	
TB SSB WW GP Other		Integrity Satisfactory: Y - N	
TB SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

gal. = Standard Evacuation Volume

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.9	3.8	5.7			
0943	0946	0949	0953			Well Sample Time: 0953
5.48	5.46	5.51	5.49			Remarks:
21.4	25.1	21.2	21.2			
516	569	558	537			
50.9	29.4	26.3	31.6			
1	1	1	1			

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		JULY 10, 2015		Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel		BTF, RA		Guard Pipe: PVC - Metal - No	Locking Cap: Y - N
Facility Name		Westinghouse		Protective Abutment: Y - N	Integrity Satisfactory: Y - N
Well ID #		W-48		Well Yield: Low - Mod - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) =		44.00			
Depth To Groundwater (DGW) =		26.80			
Length Of Water Column (LWC) =		17.2			
1 Casing Volume (OCV) = LWC x		.652		gal.	
3 Casing Volumes =		11.2		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation		TB SSB WW (GP) Other			
Method of Sample Collection		(TB) SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Granfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11.2	22.4	33.6			
1027	1034	1041	1050			
5.92	6.23	5.68	5.70			
22.4	25.6	20.5	21.3			
1225	117.9	107.9	106.3			
131	25.8	9.36	3.74			
1	1	1	1			

ENTH  
7-10-85

Well Sample Time: 1050  
Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

**Enclosure d)**

**Shealy Environmental Services Lab Reports  
Nitrate Results**

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06011

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ06011

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #RW2	Aqueous	10/06/2014 1005	10/06/2014
002	Well #41R	Aqueous	10/06/2014 1022	10/06/2014
003	Well #26	Aqueous	10/06/2014 1042	10/06/2014
004	Well #45	Aqueous	10/06/2014 1105	10/06/2014

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: PJ06011

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #RW2	Aqueous	Nitrate - N	353.2	33		mg/L	5
002	Well #41R	Aqueous	Nitrate - N	353.2	62		mg/L	6
003	Well #26	Aqueous	Nitrate - N	353.2	3.3		mg/L	7
004	Well #45	Aqueous	Nitrate - N	353.2	4.5		mg/L	8
(4 detections)								

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ06011-001

Description: Well #RW2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/07/2014 1056	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	33		0.40	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 5 of 8

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-002			
Description: Well #41R				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	10/07/2014 1104	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	62		0.80	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-003			
Description: Well #26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1101	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.3		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-004			
Description: Well #45				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	5	10/07/2014 1102	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	4.5		0.10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 06086

Client: <u>Westinghouse E&amp;C</u>		Report to Contact: <u>Cynthia Colodan</u>		Sampler (Printed Name): <u>R. G. G.</u>		Quote No.
Address: <u>801 Bluff Rd</u>		Telephone No. / Fax No. / Email: <u>647-3171</u>		Waybill No.		Page
City: <u>Hopkins</u>	State: <u>SC</u>	Zip Code: <u>29061</u>	Number of Containers: <u>4</u> of <u>1</u>			
Project Name: <u>Hopkins</u>			Bottle (See Instructions on back): <u>Preservative</u>			
Preservative:			Matrix:			
1. Unpres.			1. Unpres.			
2. NaOH/ZnA			2. NaOH			
3. H2SO4			3. H2SO4			
4. HNO3			4. HNO3			
5. HCL			5. HCL			
6. Na Thio.			6. Na Thio.			
P.O. Number			Analysis			
Sample ID / Description (Containers for each sample may be continued on one line)			Date	Time	Matrix	Container
W211 #2W2			10/6/14	1005	G	✓
W211 #412			10/6/14	1022	G	✓
W211 #26			10/6/14	1042	G	✓
W211 #48			10/6/14	1105	G	✓
Groundwater			Groundwater			
PJ06011			PJ06011			
Turn Around Time Required (Prior lab approval required for expedited TAT)			Possible Hazard Identification			
Standard <input checked="" type="checkbox"/> Rush (Please Specify)			Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
Relinquished by: <u>R. G. G.</u>			Received by: <u>R. G. G.</u>		Date: <u>10/6/14</u>	Time: <u>1115</u>
2. Relinquished by:			Received by:		Date:	Time:
3. Relinquished by:			Received by:		Date:	Time:
4. Relinquished by: <u>R. G. G.</u>			Received by: <u>Kelly</u>		Date: <u>10-6-14</u>	Time: <u>1245</u>
Note: All samples are retained for six weeks from receipt unless other arrangements are made.			LAB USE ONLY		Receipt Temp: <u>21.0</u> °C	Temp. Blank: <u>10.0</u> °C

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 10-6-14 Lot #: P106011

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>182.6</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>+0.4</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:



## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ06035  
Date Completed: 10/07/2014



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ06035 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06035

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ06035

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #24	Aqueous	10/06/2014 0907	10/06/2014
002	Well #33	Aqueous	10/06/2014 1136	10/06/2014
003	Well #44	Aqueous	10/06/2014 1200	10/06/2014
004	Well #15	Aqueous	10/06/2014 1222	10/06/2014
005	Well #23R	Aqueous	10/06/2014 1350	10/06/2014
006	Well #14	Aqueous	10/06/2014 1415	10/06/2014
007	Well #16	Aqueous	10/06/2014 1430	10/06/2014
008	Well #27	Aqueous	10/06/2014 1445	10/06/2014

(8 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ06035

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #24	Aqueous	Nitrate - N	353.2	0.055		mg/L	5
002	Well #33	Aqueous	Nitrate - N	353.2	10		mg/L	6
003	Well #44	Aqueous	Nitrate - N	353.2	3.8		mg/L	7
004	Well #15	Aqueous	Nitrate - N	353.2	24		mg/L	8
005	Well #23R	Aqueous	Nitrate - N	353.2	0.93		mg/L	9
006	Well #14	Aqueous	Nitrate - N	353.2	0.44		mg/L	10
007	Well #16	Aqueous	Nitrate - N	353.2	2.9		mg/L	11

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ06035-001

Description: Well #24

Matrix: Aqueous

Date Sampled: 10/06/2014 0907

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1030	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.055		0.020	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 5 of 12

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-002			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 10/06/2014 1136							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	5	10/07/2014 1052	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	10		0.10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-003			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 10/06/2014 1200							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1053	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.8		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-004			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 10/06/2014 1222							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/07/2014 1103	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	24		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-005			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 10/06/2014 1350							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1036	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.93		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-006			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 10/06/2014 1415							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1037	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.44		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-007			
Description: Well #16				Matrix: Aqueous			
Date Sampled: 10/06/2014 1430							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1055	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-008			
Description: Well #27				Matrix: Aqueous			
Date Sampled: 10/06/2014 1445							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1042	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06087

Client Westinghouse Ele Co		Report to Contact Cynthia Logsdon		Sampler (Printed Name) R. Cross		Quote No.
Address 5801 Bluff Rd		Telephone No. / Fax No. / Email 643-3171		Waybill No.		Page of
City Hopkins	State SC	Zip Code 29001	Preservative			
Project Name			Bottle (See instructions on back) Preservative			
Project Number			Barcode PJ06035			
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	Matrix		
				Composite	Grab	Other
W211 #24		10/6/14	0907			
W211 #33		10/6/14	1136			
W211 #44		10/6/14	1200			
W211 #15		10/6/14	1222			
W211 #232		10/6/14	1350			
W211 #14		10/6/14	1415			
W211 #16		10/6/14	1430			
W211 #27		10/6/14	1445			
Analysis Groundwater						
Possible Hazard Identification <input checked="" type="checkbox"/> Acid Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown						
QC Requirements (Specify)				1. Received by C. Logsdon Date 10-6-14 Time 1525		
				2. Received by Date Time		
				3. Received by Date Time		
				4. Laboratory Received by C. Logsdon Date 10-6-14 Time 1650		
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on (date) (check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack    Receipt Temp. 13.4 °C    Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N		

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP / 10-6-14 Lot #: P106035

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>13.3 / 13.4</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>+0.4</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ07035  
Date Completed: 10/16/2014



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ07035 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ07035

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary Westinghouse Electric Company Lot Number: PJ07035

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL#38	Aqueous	10/07/2014 0847	10/07/2014
002	WELL#38 DUPLICATE	Aqueous	10/07/2014 0847	10/07/2014
003	WELL#29	Aqueous	10/07/2014 0911	10/07/2014
004	WELL#30	Aqueous	10/07/2014 0931	10/07/2014
005	WELL#22	Aqueous	10/07/2014 0954	10/07/2014
006	WELL#18	Aqueous	10/07/2014 1012	10/07/2014
007	WELL#28	Aqueous	10/07/2014 1042	10/07/2014
008	WELL#13R	Aqueous	10/07/2014 1110	10/07/2014
009	WELL#13R DUPLICATE	Aqueous	10/07/2014 1110	10/07/2014
010	WELL#7	Aqueous	10/07/2014 1133	10/07/2014
011	WELL#10	Aqueous	10/07/2014 1155	10/07/2014
012	WELL#20	Aqueous	10/07/2014 1407	10/07/2014
013	WELL#32	Aqueous	10/07/2014 1437	10/07/2014

(13 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ07035

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL#38	Aqueous	Nitrate - N	353.2	12		mg/L	5
002	WELL#38 DUPLICATE	Aqueous	Nitrate - N	353.2	12		mg/L	6
003	WELL#29	Aqueous	Nitrate - N	353.2	72		mg/L	7
004	WELL#30	Aqueous	Nitrate - N	353.2	46		mg/L	8
005	WELL#22	Aqueous	Nitrate - N	353.2	240		mg/L	9
006	WELL#18	Aqueous	Nitrate - N	353.2	680		mg/L	10
007	WELL#28	Aqueous	Nitrate - N	353.2	1.7		mg/L	11
008	WELL#13R	Aqueous	Nitrate - N	353.2	30		mg/L	12
009	WELL#13R DUPLICATE	Aqueous	Nitrate - N	353.2	31		mg/L	13
010	WELL#7	Aqueous	Nitrate - N	353.2	200		mg/L	14
011	WELL#10	Aqueous	Nitrate - N	353.2	86		mg/L	15
013	WELL#32	Aqueous	Nitrate - N	353.2	160		mg/L	17

(12 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-001			
Description: WELL#38				Matrix: Aqueous			
Date Sampled: 10/07/2014 0847							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/08/2014 1826	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-002			
Description: WELL#38 DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/07/2014 0847							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/08/2014 1905	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ07035-003

Description: WELL#29

Matrix: Aqueous

Date Sampled: 10/07/2014 0911

Date Received: 10/07/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	10/08/2014 2022	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	72		0.80	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-004			
Description: WELL#30				Matrix: Aqueous			
Date Sampled: 10/07/2014 0931							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	10/08/2014 2023	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	46		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ07035-005

Description: WELL#22

Matrix: Aqueous

Date Sampled: 10/07/2014 0954

Date Received: 10/07/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	150	10/08/2014 2024	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	240		3.0	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-006			
Description: WELL#18				Matrix: Aqueous			
Date Sampled: 10/07/2014 1012							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	500	10/08/2014 2040	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	680		10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-007			
Description: WELL#28				Matrix: Aqueous			
Date Sampled: 10/07/2014 1042							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/08/2014 1910	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	1.7		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-008			
Description: WELL#13R				Matrix: Aqueous			
Date Sampled: 10/07/2014 1110							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/08/2014 2026	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-009			
Description: WELL#13R DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/07/2014 1110							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/08/2014 2027	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	31		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-010			
Description: WELL#7				Matrix: Aqueous			
Date Sampled: 10/07/2014 1133							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	10/08/2014 2029	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	200		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-011			
Description: WELL#10				Matrix: Aqueous			
Date Sampled: 10/07/2014 1155							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	10/08/2014 2030	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	86		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-012			
Description: WELL#20				Matrix: Aqueous			
Date Sampled: 10/07/2014 1407							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/08/2014 1921	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-013			
Description: WELL#32				Matrix: Aqueous			
Date Sampled: 10/07/2014 1437							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	90	10/08/2014 2031	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	160		1.8	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06088

Client: Westinghouse Elec Co		Report to Contact: Cynthia London		Sampler (Printed Name): R. Gross		Quote No.	
Address: 8801 Bluff Rd		Telephone No. / Fax No. / Email: 647-3171		Waybill No.		Page of	
City: Hopkins		State: SC		Zip Code: 29001		Number of Containers	
Project Name:		Preservative:		1. Unpres. 4. HNO3 7. NaOH		Bottle (See Instructions on back)	
		2. NaOH/ZnA 5. HCL		3. H2SO4 6. Na Thio.		Preservative	
Project Number		P.O. Number		Matrix		Barcode: PJ07035	
Sample ID / Description (Containers for each sample may be conducted on one line)		Date		Time		Analysis	
Well #38		10/7/14		0847		Nitrates	
Well #38 duplicate		10/7/14		0847		Ground Water	
Well #29		10/7/14		0911			
Well #30		10/7/14		0931			
Well #22		10/7/14		0954			
Well #8		10/7/14		1012			
Well #28		10/7/14		1042			
Well #13a		10/7/14		1110			
Well #13a duplicate		10/7/14		1110			
Well #7		10/7/14		1133			
Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Possible Hazard Identification	
Standard <input type="checkbox"/> Rush (P/each Specify)		<input type="checkbox"/> Return to Client		1. Received by: [Signature] Date: 10/7/14 Time: 1515		Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler: [Signature]		Date: 10/7/14 Time: 1515		2. Received by: [Signature]		Date: 10/7/14 Time: 1515	
2. Relinquished by: [Signature]		Date: 10/7/14 Time: 1540		3. Received by:		Date: Time:	
3. Relinquished by:		Date: Time:		4. Laboratory Received by: [Signature]		Date: 10/7/14 Time: 1540	
4. Relinquished by:		Date: Time:		LAB USE ONLY		Receipt Temp: 11.9 °C Temp. Blank: <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N	

Note: All samples are retained for six weeks from receipt unless other arrangements are made.



**Shealy Environmental Services, Inc.**  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9701

Number 06089

Level 1 Report v2.1

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-A2-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam 10/27/14 Lot #: 9207035

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>MS 119</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>0.4</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed? 5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: <u>mam</u> Date: <u>10/27/14</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ08037  
Date Completed: 10/15/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ08037 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

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## Case Narrative

### Westinghouse Electric Company

Lot Number: PJ08037

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ08037

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #3A	Aqueous	10/08/2014 0942	10/08/2014
002	WELL #3A DUPLICATE	Aqueous	10/08/2014 0942	10/08/2014
003	WELL #47	Aqueous	10/08/2014 1025	10/08/2014
004	WELL #17	Aqueous	10/08/2014 1150	10/08/2014
005	WELL #39	Aqueous	10/08/2014 1407	10/08/2014
006	WELL #43	Aqueous	10/08/2014 1430	10/08/2014

(6 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: PJ08037

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	WELL #47	Aqueous	Nitrate - N	353.2	27		mg/L	7
004	WELL #17	Aqueous	Nitrate - N	353.2	14		mg/L	8
005	WELL #39	Aqueous	Nitrate - N	353.2	130		mg/L	9
006	WELL #43	Aqueous	Nitrate - N	353.2	5.4		mg/L	10

(4 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-001			
Description: WELL #3A				Matrix: Aqueous			
Date Sampled: 10/08/2014 0942							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/09/2014 1028	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-002			
Description: WELL #3A DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/08/2014 0942							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/09/2014 1031	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-003			
Description: WELL #47				Matrix: Aqueous			
Date Sampled: 10/08/2014 1025							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	10/09/2014 1103	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	27		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-004			
Description: WELL #17				Matrix: Aqueous			
Date Sampled: 10/08/2014 1150							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/09/2014 1104	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	14		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ08037-005

Description: WELL #39

Matrix: Aqueous

Date Sampled: 10/08/2014 1407

Date Received: 10/08/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	10/09/2014 1132	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	130		2.0	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 9 of 10

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-006			
Description: WELL #43				Matrix: Aqueous			
Date Sampled: 10/08/2014 1430							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	10/09/2014 1106	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.4		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06091

Client: <u>Westinghouse Elec Co</u>		Report to Contact: <u>Cynthia Cogsdon</u>		Sampler (Printed Name): <u>R. Grews</u>		Quote No.
Address: <u>8201 Bluff Rd</u>		Telephone No. / Fax No. / Email: <u>647-3171</u>		Waybill No.		Page <u>1</u> of <u>1</u>
City: <u>Hopkins</u>		State: <u>SC</u>		Zip Code: <u>29001</u>		Number of Containers: <u>1</u>
Project Name: <u></u>		Preservative: <u>1. Urines, 4. HNO3, 7. NaOH</u>		Bottle (See instructions on back): <u></u>		Preservative: <u></u>
Project Number: <u></u>		3. H2SO4		6. Na Thio.		Barcode: <u>PJ08037</u>
Sample ID / Description (Containers for each sample may be contained on one line)		Date		Time		Matrix
Well #3A		10/8/14		0940		G
Well #3A duplicate		10/8/14		0942		G
Well #47		10/8/14		1025		G
Well #17		10/8/14		1150		G
Well #39		10/8/14		1407		G
Well #43		10/8/14		1430		G
Analysis		Nitrate		Groundwater		
Sample Disposal		Return to Client		Disposal by Lab		Possible Hazard Identification
Turn Around Time Required (Prior lab approval required for expedited TAT)		Date		Time		Flammable <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>
1. Relinquished by / Sampler		Date		Time		1. Received by <u>R. Grews</u> Date <u>10/8/14</u> Time <u>1520</u>
2. Relinquished by		Date		Time		2. Received by <u></u> Date <u></u> Time <u></u>
3. Relinquished by		Date		Time		3. Received by <u></u> Date <u></u> Time <u></u>
4. Relinquished by		Date		Time		4. Laboratory Received by <u></u> Date <u>10/8/14</u> Time <u>1550</u>
Note: All samples are retained for six weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on site (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Receipt Temp. <u>15.2</u> °C		Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam / 10/2/14 Lot #: PJ08037

Means of receipt: <input checked="" type="checkbox"/> SESI			<input type="checkbox"/> Client	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> Airborne Exp	<input type="checkbox"/> Other
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		1. Were custody seals present on the cooler?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?				
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:							
<u>15.7/15.8</u> °C / °C / °C / °C							
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>0.1</u> °C							
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None							
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Were sample IDs listed on all sample containers?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Was collection date & time listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Was collection date & time listed on all sample containers?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Were tests to be performed listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Did all samples arrive in the proper containers for each test?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Did all containers arrive in good condition (unbroken, lids on, etc.)?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		14. Was adequate sample volume available?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		16. Were any samples containers missing?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		17. Were there any excess samples not listed on COC?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pca-size" (¼" or 6mm in diameter) in any VOA vials?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		24. Was the quote number used taken from the container label?				
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)							
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.							
Sample(s) _____ were received with bubbles >6 mm in diameter.							
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)							
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____							
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____							
Sample labels applied by: <u>mam</u> Verified by: <u>mam</u> Date: <u>10/2/14</u>							

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA12016  
Date Completed: 01/20/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* QA12016 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA12016

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

---

Sample Summary  
Westinghouse Electric Company  
Lot Number: QA12016

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #RW2	Aqueous	01/12/2015 1034	01/12/2015
002	Well #41R	Aqueous	01/12/2015 1052	01/12/2015
003	Well #26	Aqueous	01/12/2015 1012	01/12/2015
004	Well #48	Aqueous	01/12/2015 0945	01/12/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QA12016

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #RW2	Aqueous	Nitrate - N	353.2	30		mg/L	5
002	Well #41R	Aqueous	Nitrate - N	353.2	56		mg/L	6
003	Well #26	Aqueous	Nitrate - N	353.2	2.9		mg/L	7
004	Well #48	Aqueous	Nitrate - N	353.2	2.3		mg/L	8
(4 detections)								

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-001			
Description: Well #RW2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/12/2015 1445	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-002			
Description: Well #41R				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/12/2015 1446	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	56		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA12016-003

Description: Well #26

Matrix: Aqueous

Date Sampled: 01/12/2015 1012

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/12/2015 1449	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Page: 7 of 8

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-004			
Description: Well #48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/12/2015 1450	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.3		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

### ***Chain of Custody Record***

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 41863

Client <b>Westinghouse Elec Co</b>		Report to Contact <b>Cynthia Lousoos</b>		Telephone No. / E-mail <b>647-3171</b>		Quote No.	
Address <b>5801 Bluebird</b>		Sample's Signature <i>[Signature]</i>		Analysis (Attach list if more space is needed)		Page <b>1</b> of <b>1</b>	
City <b>Hopkins</b>		Printed Name <b>Randy E. Crows</b>		Barcode <b>QA12016</b>		Remarks / Cooler I.D.	
Project Name		P.O. No.		No. of Containers by Preservative Type			
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time			
Well #12W2		11/2/15		1024			
Well #4172		11/2/15		1052			
Well #240		11/2/15		1012			
Well #418		11/2/15		0945			
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		Possible Hazard Identification <input checked="" type="checkbox"/> High Hazard <input type="checkbox"/> Low Hazard <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Unknown		Date		Time	
1. Relinquished by <b>12.00</b>		11/2/15		1100			
2. Relinquished by <b>Rachel Adair</b>		11/2/15		1155			
3. Relinquished by		Date		Time			
4. Relinquished by		Date		Time			
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on (Date)		Received Time	
		Date		Time		20	

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Clinic Copy**

Document Number: F-AO-133 Effective Date: 09-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP / 1-12-15 Lot #: QA1200

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>10.1 / 2.0 °C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>-0.1 °C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pca-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>1-12-15</u>		

Comments:



Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA19014  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA19014 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA19014

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary Westinghouse Electric Company Lot Number: QA19014

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #38	Aqueous	01/19/2015 0903	01/19/2015
002	WELL #29	Aqueous	01/19/2015 0933	01/19/2015
003	WELL #30	Aqueous	01/19/2015 0953	01/19/2015
004	WELL #22	Aqueous	01/19/2015 1016	01/19/2015
005	WELL #18	Aqueous	01/19/2015 1038	01/19/2015
006	WELL #28	Aqueous	01/19/2015 1114	01/19/2015
007	WELL #13R	Aqueous	01/19/2015 1139	01/19/2015
008	WELL #7	Aqueous	01/19/2015 1356	01/19/2015
009	WELL #10	Aqueous	01/19/2015 1415	01/19/2015
010	WELL #32	Aqueous	01/19/2015 1438	01/19/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA19014

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #38	Aqueous	Nitrate - N	353.2	11		mg/L	5
002	WELL #29	Aqueous	Nitrate - N	353.2	66		mg/L	6
003	WELL #30	Aqueous	Nitrate - N	353.2	78		mg/L	7
004	WELL #22	Aqueous	Nitrate - N	353.2	64		mg/L	8
005	WELL #18	Aqueous	Nitrate - N	353.2	670		mg/L	9
006	WELL #28	Aqueous	Nitrate - N	353.2	1.4		mg/L	10
007	WELL #13R	Aqueous	Nitrate - N	353.2	30		mg/L	11
008	WELL #7	Aqueous	Nitrate - N	353.2	240		mg/L	12
009	WELL #10	Aqueous	Nitrate - N	353.2	75		mg/L	13
010	WELL #32	Aqueous	Nitrate - N	353.2	150		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-001			
Description: WELL #38				Matrix: Aqueous			
Date Sampled: 01/19/2015 0903							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	01/20/2015 1704	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	11		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-002			
Description: WELL #29				Matrix: Aqueous			
Date Sampled: 01/19/2015 0933							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1724	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	66		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-003			
Description: WELL #30				Matrix: Aqueous			
Date Sampled: 01/19/2015 0953							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1725	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	78		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-004			
Description: WELL #22				Matrix: Aqueous			
Date Sampled: 01/19/2015 1016							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1726	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	64		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-005			
Description: WELL #18				Matrix: Aqueous			
Date Sampled: 01/19/2015 1038							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	600	01/20/2015 1739	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	670		12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-006			
Description: WELL #28				Matrix: Aqueous			
Date Sampled: 01/19/2015 1114							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/20/2015 1712	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	1.4		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-007			
Description: WELL #13R				Matrix: Aqueous			
Date Sampled: 01/19/2015 1139							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/20/2015 1728	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-008			
Description: WELL #7				Matrix: Aqueous			
Date Sampled: 01/19/2015 1356							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	01/20/2015 1740	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	240		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-009			
Description: WELL #10				Matrix: Aqueous			
Date Sampled: 01/19/2015 1415							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1736	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	75		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-010			
Description: WELL #32				Matrix: Aqueous			
Date Sampled: 01/19/2015 1438							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	90	01/20/2015 1737	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	150		1.8	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 45106**

Client: Westinhouse Ele Co		Report to Contact: Cynthia Lucas		Telephone No. / E-mail: 647-3171		Quote No. 1552	
Address: 5301 Bluff Rd		Sample's Signature: Randy E. Causse		Analysis (Attach list if more space is needed)		Page 1 of 1	
City: Hopkins		Printed Name: Randy E. Causse		Barcode: QA19014		Remarks / Cooler I.D. Groundwater	
State: SC		Zip Code: 29001		Matrix: As Specified		No. of Containers by Preservative Type	
Project No.		P.O. No.		Date		Time	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Time	
W211 #38		11/19/15		0903		G	
W211 #29		11/19/15		0933		G	
W211 #30		11/19/15		0953		G	
W211 #22		11/19/15		1016		G	
W211 #18		11/19/15		1038		G	
W211 #28		11/19/15		1114		G	
W211 #13e		11/19/15		1139		G	
W211 #7		11/19/15		1356		G	
W211 #10		11/19/15		1415		G	
W211 #32		11/19/15		1438		G	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Reference: Rush (Specify)		Return to Client		Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin-Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>		Date: 11/19/15 Time: 1515	
Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		1. Received by: [Signature]		Date: 11/19/15 Time: 1515	
2. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		2. Received by: [Signature]		Date: 11/19/15 Time: 1515	
3. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		3. Received by: [Signature]		Date: 11/19/15 Time: 1515	
4. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		4. Laboratory received by: [Signature]		Date: 11/19/15 Time: 1515	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on ice (Circle) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Recept Temp. 9.3 °C	

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 06-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam/01/19/15 Lot #: 0A19017

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>19.2/19.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>1/19/15</u>		

Comments:

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Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA20061  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA20061 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA20061

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA20061

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #24	Aqueous	01/20/2015 0845	01/20/2015
002	Well #17	Aqueous	01/20/2015 0920	01/20/2015
003	Well #39	Aqueous	01/20/2015 0944	01/20/2015
004	Well #43	Aqueous	01/20/2015 1007	01/20/2015
005	Well #33	Aqueous	01/20/2015 1026	01/20/2015
006	Well #44	Aqueous	01/20/2015 1054	01/20/2015
007	Well #15	Aqueous	01/20/2015 1114	01/20/2015
008	Well #16	Aqueous	01/20/2015 1133	01/20/2015
009	Well #23R	Aqueous	01/20/2015 1403	01/20/2015
010	Well #14	Aqueous	01/20/2015 1427	01/20/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA20061

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #24	Aqueous	Nitrate - N	353.2	0.058		mg/L	5
002	Well #17	Aqueous	Nitrate - N	353.2	13		mg/L	6
003	Well #39	Aqueous	Nitrate - N	353.2	120		mg/L	7
004	Well #43	Aqueous	Nitrate - N	353.2	6.4		mg/L	8
005	Well #33	Aqueous	Nitrate - N	353.2	7.9		mg/L	9
006	Well #44	Aqueous	Nitrate - N	353.2	4.5		mg/L	10
007	Well #15	Aqueous	Nitrate - N	353.2	12		mg/L	11
008	Well #16	Aqueous	Nitrate - N	353.2	2.7		mg/L	12
009	Well #23R	Aqueous	Nitrate - N	353.2	0.31		mg/L	13
010	Well #14	Aqueous	Nitrate - N	353.2	3.3		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-001			
Description: Well #24				Matrix: Aqueous			
Date Sampled: 01/20/2015 0845							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1153	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.058		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-002			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 01/20/2015 0920							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	01/21/2015 1230	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	13		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-003			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 01/20/2015 0944							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	75	01/21/2015 1245	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	120		1.5	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-004			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 01/20/2015 1007							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	01/21/2015 1238	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.4		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-005			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 01/20/2015 1026							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	01/21/2015 1239	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.9		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-006			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 01/20/2015 1054							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	01/21/2015 1240	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	4.5		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-007			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 01/20/2015 1114							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	01/21/2015 1246	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-008			
Description: Well #16				Matrix: Aqueous			
Date Sampled: 01/20/2015 1133							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/21/2015 1242	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-009			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 01/20/2015 1403							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1207	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.31		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-010			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 01/20/2015 1427							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	01/21/2015 1243	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.3		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 45107

Client: Westinhouse E&E Co		Report to Contact: Cynthia Longsdon		Telephone No. / E-mail: 647-317		Quote No. <del>45107</del>	
Address: 5801 Bluff Rd		Sampler's Signature: Randy E. Crews		Analysis (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City: Hopkins		Printed Name: Randy E. Crews		Barcode: QA20061			
State: SC		Zip Code: 29301					
Project Name:							
Project No.	P.O. No.	Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix	No. of Containers by Preservative Type	Remarks / Cooler I.D.
		Well #24	11/20/15	0845	✓	1	Ground water
		Well #17	11/20/15	0920	✓	1	
		Well #39	11/20/15	0944	✓	1	
		Well #43	11/20/15	1007	✓	1	
		Well #33	11/20/15	1026	✓	1	
		Well #44	11/20/15	1054	✓	1	
		Well #15	11/20/15	1114	✓	1	
		Well #16	11/20/15	1133	✓	1	
		Well #23E	11/20/15	1403	✓	1	
		Well #14	11/20/15	1427	✓	1	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		<input checked="" type="checkbox"/> High-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
1. Relinquished by: <u>R. Crews</u>		Date: 11/20/15 Time: 1515		1. Received by: <u>C. Longsdon</u>		Date: 11/20/15 Time: 1515	
2. Relinquished by: <u>C. Longsdon</u>		Date: 11/20/15 Time: 1657		2. Received by:		Date: Time	
3. Relinquished by:		Date: Time		3. Received by:		Date: Time	
4. Relinquished by:		Date: Time		4. Laboratory received by: <u>John T...</u>		Date: 11/20/15 Time: 1657	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY		Recsplot Temp. 5.7 °C	
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Ice Pack			

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AQ-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: CMT / 1/20/15 Lot #: DA20001

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.8 / 5.7</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>-0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CMT</u> Verified by: _____ Date: <u>1/20/15</u>		

Comments:

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Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Lot Number: QA21024  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA21024 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA21024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA21024

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #47	Aqueous	01/21/2015 0943	01/21/2015
002	WELL #20	Aqueous	01/21/2015 1040	01/21/2015
003	WELL #27	Aqueous	01/21/2015 1105	01/21/2015
004	WELL #34	Aqueous	01/21/2015 1136	01/21/2015

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QA21024

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #47	Aqueous	Nitrate - N	353.2	34		mg/L	5
002	WELL #20	Aqueous	Nitrate - N	353.2	0.058		mg/L	6

(2 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA21024-001

Description: WELL #47

Matrix: Aqueous

Date Sampled: 01/21/2015 0943

Date Received: 01/21/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/21/2015 1720	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	34		0.60	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 5 of 8

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-002			
Description: WELL #20				Matrix: Aqueous			
Date Sampled: 01/21/2015 1040							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1703	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.058		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-003			
Description: WELL #27				Matrix: Aqueous			
Date Sampled: 01/21/2015 1105							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1704	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-004			
Description: WELL #34				Matrix: Aqueous			
Date Sampled: 01/21/2015 1136							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1705	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"





## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 41864

Client <b>Westinghouse EIS Co</b>		Report to Contact <b>Cynthia Cogsdon</b>		Telephone No. / E-mail <b>647-3171</b>		Quote No.	
Address <b>5801 BLUFF RD</b>		Sampler's Signature <i>Randy E. Cawson</i>		Analysis (Attach list if more space is needed)		Page <b>1</b> of <b>1</b>	
City <b>Hopkins</b>		Printed Name <b>Randy E. Cawson</b>		Barcode <b>QA21024</b>		Remarks / Container I.D. <b>Groundwater</b>	
State <b>SC</b>		Zip Code <b>2904</b>		Matrix <b>Nitrate</b>		No. of Containers by Preservative Type	
Project Name		P.O. No.		Date		Time	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Time	
Well #47		12/1/15		6:43		✓	
Well #20		12/1/15		10:40		✓	
Well #27		12/1/15		11:05		✓	
Well #3A		12/1/15		11:36		✓	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input type="checkbox"/> Dispose by Lab <input type="checkbox"/>		Min-Hazard <input type="checkbox"/> Biohazard <input type="checkbox"/> Radiation <input type="checkbox"/> Spill <input type="checkbox"/> Unknown <input type="checkbox"/>		Date <b>12/1/15</b> Time <b>15:10</b>	
1. Relinquished by <i>R. Cawson</i>		Date <b>12/1/15</b> Time <b>15:10</b>		1. Received by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>	
2. Relinquished by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>		2. Received by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>	
3. Relinquished by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>		3. Received by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>	
4. Relinquished by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>		4. Laboratory received by <i>[Signature]</i>		Date <b>12/1/15</b> Time <b>15:30</b>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on ice (Circle) (Yes) No ( ) Ice Pack ( ) Receipt Temp <b>10.2</b> °C			

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-193 Effective Date: 06-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam/01/15 Lot #: QA21024

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>10.3</u> <u>10.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>1/21/15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD09063  
Date Completed: 04/15/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD09063 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QD09063

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QD09063

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #RW2	Aqueous	04/09/2015 0946	04/09/2015
002	WELL #41R	Aqueous	04/09/2015 1009	04/09/2015
003	WELL #R6	Aqueous	04/09/2015 1057	04/09/2015
004	WELL #48	Aqueous	04/09/2015 1035	04/09/2015

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QD09063

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #RW2	Aqueous	Nitrate - N	353.2	19		mg/L	5
002	WELL #41R	Aqueous	Nitrate - N	353.2	51		mg/L	6
003	WELL #R6	Aqueous	Nitrate - N	353.2	2.9		mg/L	7
004	WELL #48	Aqueous	Nitrate - N	353.2	3.2		mg/L	8

(4 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-001			
Description: WELL #RW2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/10/2015 1752	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	19		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-002			
Description: WELL #41R				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/10/2015 1820	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	51		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-003			
Description: WELL #R6				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/10/2015 1801	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-004			
Description: WELL #48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/10/2015 1802	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.2		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 45108

<b>Client</b> Westinghouse Elec Co Address 5801 Bluff Rd City Hopkins State SC Zip Code 25061		<b>Report to Contact</b> Cynthia Goodson Sample's Signature <i>Cynthia Goodson</i> Product Name Randy Carius		Telephone No. / Email 647-3171 Analysis (Attach list if more space is needed)	
<b>Project No.</b>		<b>P.O. No.</b>		<b>Sample ID / Description</b> (Containers for each sample may be combined on one line.)	
W211 #2 W2 W211 #412 W211 #20 W211 #48		Date 4/9/15 4/9/15 4/9/15 4/9/15		Time 0846 1009 1057 1035	
Matrix Asana SGA SGA SGA		No of Containers by Preservative Type ASANA SGA SGA SGA		Possible Hazard Identification <input checked="" type="checkbox"/> Skin Irritant <input type="checkbox"/> Skin Corrosive <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Unknown	
Turn Around Time Required (Prior lab approval required for expedited TAT) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		CC Requirements (Specify)	
1. Requisitioned by R. Carius		Date 4/9/15		Time 1100	
2. Requisitioned by		Date		Time	
3. Requisitioned by		Date		Time	
4. Requisitioned by		Date 4/9/15		Time 1400	

**Note:** All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on (Date) 4/9/15 by R. Carius  
 Received by (Date) 4/9/15 by R. Carius  
 Received by (Date) 4/9/15 by R. Carius  
 Received by (Date) 4/9/15 by R. Carius

**DISTRIBUTION:** WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KMP/4-9-15 Lot #: QD09063

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>120</u> / <u>120</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/H&M/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KMP</u> Verified by: _____ Date: <u>4-9-15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD13033  
Date Completed: 04/19/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD13033 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QD13033

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary Westinghouse Electric Company Lot Number: QD13033

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #38	Aqueous	04/13/2015 0857	04/13/2015
002	WELL #29	Aqueous	04/13/2015 0919	04/13/2015
003	WELL #30	Aqueous	04/13/2015 0938	04/13/2015
004	WELL #22	Aqueous	04/13/2015 0958	04/13/2015
005	WELL #18	Aqueous	04/13/2015 1017	04/13/2015
006	WELL #28	Aqueous	04/13/2015 1040	04/13/2015
007	WELL #13R	Aqueous	04/13/2015 1108	04/13/2015
008	WELL #7	Aqueous	04/13/2015 1128	04/13/2015
009	WELL #10	Aqueous	04/13/2015 1143	04/13/2015
010	WELL #32	Aqueous	04/13/2015 1203	04/13/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QD13033

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #38	Aqueous	Nitrate - N	353.2	11		mg/L	5
002	WELL #29	Aqueous	Nitrate - N	353.2	64		mg/L	6
003	WELL #30	Aqueous	Nitrate - N	353.2	42		mg/L	7
004	WELL #22	Aqueous	Nitrate - N	353.2	150		mg/L	8
005	WELL #18	Aqueous	Nitrate - N	353.2	720		mg/L	9
006	WELL #28	Aqueous	Nitrate - N	353.2	5.1		mg/L	10
007	WELL #13R	Aqueous	Nitrate - N	353.2	33		mg/L	11
008	WELL #7	Aqueous	Nitrate - N	353.2	300		mg/L	12
009	WELL #10	Aqueous	Nitrate - N	353.2	66		mg/L	13
010	WELL #32	Aqueous	Nitrate - N	353.2	160		mg/L	14

(10 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-001			
Description: WELL #38				Matrix: Aqueous			
Date Sampled: 04/13/2015 0857							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	04/14/2015 1220	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	11		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-002			
Description: WELL #29				Matrix: Aqueous			
Date Sampled: 04/13/2015 0919							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/14/2015 1221	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	64		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-003			
Description: WELL #30				Matrix: Aqueous			
Date Sampled: 04/13/2015 0938							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/14/2015 1222	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	42		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-004			
Description: WELL #22				Matrix: Aqueous			
Date Sampled: 04/13/2015 0958							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	04/14/2015 1240	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	150		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-005			
Description: WELL #18				Matrix: Aqueous			
Date Sampled: 04/13/2015 1017							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	500	04/14/2015 1247	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	720		10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-006			
Description: WELL #28				Matrix: Aqueous			
Date Sampled: 04/13/2015 1040							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	04/14/2015 1225	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.1		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-007			
Description: WELL #13R				Matrix: Aqueous			
Date Sampled: 04/13/2015 1108							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/14/2015 1242	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	33		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QD13033-008

Description: WELL #7

Matrix: Aqueous

Date Sampled: 04/13/2015 1128

Date Received: 04/13/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	04/14/2015 1243	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	300		4.0	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 12 of 14

Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-009			
Description: WELL #10				Matrix: Aqueous			
Date Sampled: 04/13/2015 1143							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	60	04/14/2015 1244	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	66		1.2	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-010			
Description: WELL #32				Matrix: Aqueous			
Date Sampled: 04/13/2015 1203							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	04/14/2015 1245	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	160		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 43469

Client: <b>Westinghouse Elec Co</b>		Report to Contact: <b>Cynthia Longdon</b>		Telephone No. / E-mail: <b>647-3171</b>		Quote No.	
Address: <b>5801 Blue Rd</b>		Sampler's Signature: <i>[Signature]</i>		Analysis (Attach list if more space is needed)		Page <b>1</b> of <b>1</b>	
City: <b>Hopkins</b>	State: <b>SC</b>	Zip Code: <b>29001</b>	Printed Name: <b>Randy E. Green</b>		Barcode:		
Project Name:		P.O. No.:		ID: <b>QD13033</b>			

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix		No. of Containers by Preservative Type						Remarks / Container I.D.	
			Agarose	Solid	Aspirate	Express	MSD	MSD	MSD	MSD		
Well #38	4/13/15	0857	✓		✓							Groundwater
Well #29	4/13/15	0919	✓		✓							
Well #30	4/13/15	0938	✓		✓							
Well #22	4/13/15	0958	✓		✓							
Well #18	4/13/15	1017	✓		✓							
Well #28	4/13/15	1040	✓		✓							
Well #13A	4/13/15	1108	✓		✓							
Well #7	4/13/15	1128	✓		✓							
Well #10	4/13/15	1143	✓		✓							
Well #33	4/13/15	1203	✓		✓							

Turn Around Time Required (Prior lab approval required for expedited MAT.) Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal 1. Return to Client <input type="checkbox"/> 2. Disposal by Lab <input checked="" type="checkbox"/> 3. Non-Hazard <input type="checkbox"/> 4. Flammable <input type="checkbox"/> 5. Skin Irritant <input type="checkbox"/> 6. Poison <input type="checkbox"/> 7. Unknown <input type="checkbox"/>		Possible Hazard Identification 1. Received by <i>[Signature]</i> 2. Received by <i>[Signature]</i> 3. Received by <i>[Signature]</i> 4. Laboratory received by <i>[Signature]</i>	
	Date: <b>4/13/15</b>	Time: <b>1510</b>	Date: <b>4/13/15</b>	Time: <b>1510</b>

1. Relinquished by <i>[Signature]</i>	Date: <b>4/13/15</b>	Time: <b>1510</b>
2. Relinquished by <i>[Signature]</i>	Date: <b>4/13/15</b>	Time: <b>1510</b>
3. Relinquished by <i>[Signature]</i>	Date: <b>4/13/15</b>	Time: <b>1510</b>
4. Relinquished by <i>[Signature]</i>	Date: <b>4/13/15</b>	Time: <b>1510</b>

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

**DISTRIBUTION:** WHITE & YELLOW-ASTUM to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F.A.D. 139 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: man/04/31/15 Lot #: 6013033

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.0/5.0</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pca-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>man</u> Verified by: _____ Date: <u>4/31/15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD16029  
Date Completed: 04/19/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD16029 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #3A	Aqueous	04/16/2015 0918	04/16/2015
002	Well #27	Aqueous	04/16/2015 0940	04/16/2015
003	Well #20	Aqueous	04/16/2015 1005	04/16/2015
004	Well #24	Aqueous	04/16/2015 1029	04/16/2015
005	Well #47	Aqueous	04/16/2015 1126	04/16/2015
006	Well #44	Aqueous	04/16/2015 1145	04/16/2015
007	Well #33	Aqueous	04/16/2015 1158	04/16/2015

(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	Well #20	Aqueous	Nitrate - N	353.2	0.051		mg/L	7
004	Well #24	Aqueous	Nitrate - N	353.2	0.054		mg/L	8
005	Well #47	Aqueous	Nitrate - N	353.2	31		mg/L	9
006	Well #44	Aqueous	Nitrate - N	353.2	3.7		mg/L	10
007	Well #33	Aqueous	Nitrate - N	353.2	6.9		mg/L	11

(5 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-001			
Description: Well #3A				Matrix: Aqueous			
Date Sampled: 04/16/2015 0918				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1750	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-002			
Description: Well #27				Matrix: Aqueous			
Date Sampled: 04/16/2015 0940				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1753	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-003			
Description: Well #20				Matrix: Aqueous			
Date Sampled: 04/16/2015 1005				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1754	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.051		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-004			
Description: Well #24				Matrix: Aqueous			
Date Sampled: 04/16/2015 1029				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1801	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.054		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-005			
Description: Well #47				Matrix: Aqueous			
Date Sampled: 04/16/2015 1126				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/16/2015 1857	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	31		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-006			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 04/16/2015 1145				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	04/16/2015 1837	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.7		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-007			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 04/16/2015 1158				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	04/16/2015 1838	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.9		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 43470

Client: <u>Westinhouse Ele Co</u>		Report to Contact: <u>Cynthia Coats</u>		Telephone No. / Email: <u>647-371</u>		Quote No.	
Address: <u>5801 Bluff Rd</u>		Signature: <u>[Signature]</u>		Analyse (Attach list if more space is needed)			
City: <u>Hopkins</u>		Printed Name: <u>Randy Coats</u>					
State: <u>SC</u>		Zip Code: <u>29061</u>					
Project Name		P.O. No.		Barcode:		QD16029	
Project No.	Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	No. of Containers by Preservative Type	Remarks / Cooler I.D.	
	Well #3A	4/16/15	0918	1	1	Grandwater	
	Well #27	4/16/15	0940	2	2		
	Well #20	4/16/15	1005	3	3		
	Well #24	4/16/15	1029	3	3		
	Well #47	4/16/15	1126	3	3		
	Well #44	4/16/15	1145	3	3		
	Well #33	4/16/15	1158	3	3		
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input checked="" type="checkbox"/> Rush (Specify)		Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input checked="" type="checkbox"/>		Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>		Date/Time	
1. Requested by: <u>R. Coats</u>		Date: <u>4/16/15</u> Time: <u>1515</u>		1. Received by: <u>[Signature]</u>		Date/Time: <u>4/16/15 1515</u>	
2. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		2. Received by: <u>[Signature]</u>		Date/Time: <u>4/16/15 1535</u>	
3. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		3. Received by: <u>[Signature]</u>		Date/Time: <u>4/16/15 1535</u>	
4. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		4. Requested by: <u>[Signature]</u>		Date/Time: <u>4/16/15 1535</u>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.							
LAB USE ONLY Received on (Date) (Circle) Yes No Ice Pack Receipt Temp. <u>1-2</u> °C <u>68</u> °F							

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Cient Copy

Document Number: F-AD-133 Effective Date: 08-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 11-16-15 Lot #: QD16029

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.2</u> / <u>11.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>4-16-15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD17040  
Date Completed: 05/01/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD17040 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #17	Aqueous	04/17/2015 0918	04/17/2015
002	Well #39	Aqueous	04/17/2015 0937	04/17/2015
003	Well #43	Aqueous	04/17/2015 0953	04/17/2015
004	Well #15	Aqueous	04/17/2015 1017	04/17/2015
005	Well #23R	Aqueous	04/17/2015 1034	04/17/2015
006	Well #14	Aqueous	04/17/2015 1056	04/17/2015
007	Well #16	Aqueous	04/17/2015 1110	04/17/2015

(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #17	Aqueous	Nitrate - N	353.2	17		mg/L	5
002	Well #39	Aqueous	Nitrate - N	353.2	94		mg/L	6
003	Well #43	Aqueous	Nitrate - N	353.2	7.0		mg/L	7
004	Well #15	Aqueous	Nitrate - N	353.2	26		mg/L	8
005	Well #23R	Aqueous	Nitrate - N	353.2	0.55		mg/L	9
006	Well #14	Aqueous	Nitrate - N	353.2	2.4		mg/L	10
007	Well #16	Aqueous	Nitrate - N	353.2	2.7		mg/L	11

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-001			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 04/17/2015 0918				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/17/2015 1901	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	17		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-002			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 04/17/2015 0937				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/17/2015 1900	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	94		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-003			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 04/17/2015 0953				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/17/2015 1902	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.0		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-004			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 04/17/2015 1017				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	04/17/2015 1906	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	26		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-005			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 04/17/2015 1034				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/17/2015 1847	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.55		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-006			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 04/17/2015 1056				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/17/2015 1903	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.4		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-007			
Description: Well #16				Matrix: Aqueous			
Date Sampled: 04/17/2015 1110				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/17/2015 1905	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 43471

Client: Westinhausz Elz Co		Report to Contact: Cynthia Cogsdon		Telephone No. / E-mail: 647-3171		Quote No.	
Address: 501 Bluff Rd		Sampler's Signature: [Signature]		Analysis (Attach list if more space is needed)		Page 1 of 1	
City: Hopkinds		Printed Name: Randy Carius		Barcode: QD17040			
State: SC		Zip Code: 29061					
Project Name:		P.O. No.:					
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Remarks / Cooler I.D.	
W211 #17		4/17/15		0918		Groundwater	
W211 #39		4/17/15		0937			
W211 #43		4/17/15		0953			
W211 #15		4/17/15		1017			
W211 #23R		4/17/15		1034			
W211 #14		4/17/15		1056			
W211 #16		4/17/15		1110			
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input type="checkbox"/> Rush (Specify)		Return to Client <input type="checkbox"/> Dispose by Lab		Non-Hazard <input type="checkbox"/> Removable <input type="checkbox"/> Solvent <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		Date: 4/17/15 Time: 1510	
1. Requisitioned by: [Signature]		Date: 4/17/15 Time: 1510		1. Received by: [Signature]		Date: 4/17/15 Time: 1510	
2. Requisitioned by: [Signature]		Date: 4/17/15 Time: 1530		2. Received by: [Signature]		Date: [ ] Time: [ ]	
3. Requisitioned by: [Signature]		Date: [ ] Time: [ ]		3. Received by: [Signature]		Date: [ ] Time: [ ]	
4. Requisitioned by: [Signature]		Date: [ ] Time: [ ]		4. Received by: [Signature]		Date: 4/17/15 Time: 1530	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.							
LAB USE ONLY				Received on: (Circle) Yes No			
Receipt Temp: 29 °C				Receipt Temp: 29 °C			

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Cuent Copy

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: WUP 11-17-15 Lot #: QD176

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.9</u> / <u>12.9</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>WUP</u> Verified by: _____ Date: <u>11-17-15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG10039  
Date Completed: 07/13/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG10039

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

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If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QG10039

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #33	Aqueous	07/10/2015 0846	07/10/2015
002	WELL #RW2	Aqueous	07/10/2015 0932	07/10/2015
003	WELL #41R	Aqueous	07/10/2015 0953	07/10/2015
004	WELL #26	Aqueous	07/10/2015 1010	07/10/2015
005	WELL #48	Aqueous	07/10/2015 1050	07/10/2015
006	WELL #24	Aqueous	07/10/2015 1118	07/10/2015
007	WELL #44	Aqueous	07/10/2015 1150	07/10/2015
008	WELL #15	Aqueous	07/10/2015 1212	07/10/2015
009	WELL #23R	Aqueous	07/10/2015 1351	07/10/2015
010	WELL #14	Aqueous	07/10/2015 1422	07/10/2015
011	WELL #16	Aqueous	07/10/2015 1440	07/10/2015

(11 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG10039

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #33	Aqueous	Nitrate - N	353.2	7.5		mg/L	5
002	WELL #RW2	Aqueous	Nitrate - N	353.2	21		mg/L	6
003	WELL #41R	Aqueous	Nitrate - N	353.2	54		mg/L	7
004	WELL #26	Aqueous	Nitrate - N	353.2	2.7		mg/L	8
005	WELL #48	Aqueous	Nitrate - N	353.2	3.4		mg/L	9
006	WELL #24	Aqueous	Nitrate - N	353.2	0.024		mg/L	10
007	WELL #44	Aqueous	Nitrate - N	353.2	2.5		mg/L	11
008	WELL #15	Aqueous	Nitrate - N	353.2	24		mg/L	12
009	WELL #23R	Aqueous	Nitrate - N	353.2	0.50		mg/L	13
010	WELL #14	Aqueous	Nitrate - N	353.2	0.46		mg/L	14
011	WELL #16	Aqueous	Nitrate - N	353.2	2.6		mg/L	15

(11 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-001			
Description: WELL #33				Matrix: Aqueous			
Date Sampled: 07/10/2015 0846							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/11/2015 1147	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.5		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-002			
Description: WELL #RW2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	18	07/11/2015 1204	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	21		0.36	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-003			
Description: WELL #41R				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	07/11/2015 1205	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	54		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-004			
Description: WELL #26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1151	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-005			
Description: WELL #48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	07/11/2015 1152	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.4		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-006			
Description: WELL #24				Matrix: Aqueous			
Date Sampled: 07/10/2015 1118							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1132	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.024		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-007			
Description: WELL #44				Matrix: Aqueous			
Date Sampled: 07/10/2015 1150							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1153	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.5		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-008			
Description: WELL #15				Matrix: Aqueous			
Date Sampled: 07/10/2015 1212							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	18	07/11/2015 1206	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	24		0.36	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-009			
Description: WELL #23R				Matrix: Aqueous			
Date Sampled: 07/10/2015 1351							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1135	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.50		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-010			
Description: WELL #14				Matrix: Aqueous			
Date Sampled: 07/10/2015 1422							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1136	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.46		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-011			
Description: WELL #16				Matrix: Aqueous			
Date Sampled: 07/10/2015 1440							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1155	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.6		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 40151

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s): PINK-Field/Clinic Copy



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 40150

Client <u>Westinghouse Elec Co</u>		Report to Contact <u>Cynthia Legsdon</u>		Telephone No. / E-mail <u>649-3171</u>		Quote No.	
Address <u>5801 Bluff Rd</u>		Sample's Signature <u>[Signature]</u>		Analysis (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City <u>Hopkirk</u>		Printed Name <u>Randy E. Crews</u>		Barcode		Remarks / Cooler I.D. <u>Ground Water</u>	
State <u>SC</u>		Zip Code <u>29061</u>		Project No.		Project Name	
Sample ID / Description (Containers for each sample may be combined on one line)		Date		Time		No. of Containers by Preservative Type	
Well #16		7/10/15		1440		1	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		<input type="checkbox"/> Return to Office <input type="checkbox"/> Special by Lab		<input checked="" type="checkbox"/> Bio-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		<input type="checkbox"/> Date <input type="checkbox"/> Time	
1. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1575</u>		1. Received by		Date <u>7/10/15</u> Time <u>1575</u>	
2. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1545</u>		2. Received by		Date <u>7/10/15</u> Time <u>1545</u>	
3. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1545</u>		3. Received by		Date <u>7/10/15</u> Time <u>1545</u>	
4. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1545</u>		4. Relinquished by		Date <u>7/10/15</u> Time <u>1545</u>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on ice (Circle) (Yes) <u>(Yes)</u> No Ice Pack			
				Receipt Temp. <u>2.5 °C</u>			

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Cient Copy

Document Number: FAD-133 Effective Date: 08-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mem 7/10/15 Lot #: QC10039

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>mem 7/10/15</u> <u>8.52</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mem</u> Verified by: _____ Date: <u>7/10/15</u>		

Comments:



Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG13032  
Date Completed: 07/16/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG13032

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QG13032

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #38	Aqueous	07/13/2015 0845	07/13/2015
002	Well #29	Aqueous	07/13/2015 0909	07/13/2015
003	Well #30	Aqueous	07/13/2015 0930	07/13/2015
004	Well #22	Aqueous	07/13/2015 0951	07/13/2015
005	Well #18	Aqueous	07/13/2015 1010	07/13/2015
006	Well #28	Aqueous	07/13/2015 1038	07/13/2015
007	Well #13R	Aqueous	07/13/2015 1105	07/13/2015
008	Well #7	Aqueous	07/13/2015 1132	07/13/2015
009	Well #10	Aqueous	07/13/2015 1405	07/13/2015
010	Well #32	Aqueous	07/13/2015 1425	07/13/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG13032

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #38	Aqueous	Nitrate - N	353.2	9.9		mg/L	5
002	Well #29	Aqueous	Nitrate - N	353.2	58		mg/L	6
003	Well #30	Aqueous	Nitrate - N	353.2	69		mg/L	7
004	Well #22	Aqueous	Nitrate - N	353.2	170		mg/L	8
005	Well #18	Aqueous	Nitrate - N	353.2	740		mg/L	9
006	Well #28	Aqueous	Nitrate - N	353.2	5.2		mg/L	10
007	Well #13R	Aqueous	Nitrate - N	353.2	30		mg/L	11
008	Well #7	Aqueous	Nitrate - N	353.2	320		mg/L	12
009	Well #10	Aqueous	Nitrate - N	353.2	85		mg/L	13
010	Well #32	Aqueous	Nitrate - N	353.2	190		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-001			
Description: Well #38				Matrix: Aqueous			
Date Sampled: 07/13/2015 0845							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	07/14/2015 1236	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	9.9		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-002			
Description: Well #29				Matrix: Aqueous			
Date Sampled: 07/13/2015 0909							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/14/2015 1255	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	58		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-003			
Description: Well #30				Matrix: Aqueous			
Date Sampled: 07/13/2015 0930							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	07/14/2015 1301	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	69		0.80	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-004			
Description: Well #22				Matrix: Aqueous			
Date Sampled: 07/13/2015 0951							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1302	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	170		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-005			
Description: Well #18				Matrix: Aqueous			
Date Sampled: 07/13/2015 1010							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	400	07/14/2015 1309	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	740		8.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-006			
Description: Well #28				Matrix: Aqueous			
Date Sampled: 07/13/2015 1038							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/14/2015 1247	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.2		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-007			
Description: Well #13R				Matrix: Aqueous			
Date Sampled: 07/13/2015 1105							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/14/2015 1305	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-008			
Description: Well #7				Matrix: Aqueous			
Date Sampled: 07/13/2015 1132							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1306	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	320		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-009			
Description: Well #10				Matrix: Aqueous			
Date Sampled: 07/13/2015 1405							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	07/14/2015 1307	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	85		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-010			
Description: Well #32				Matrix: Aqueous			
Date Sampled: 07/13/2015 1425							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1308	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	190		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 40152**

Client: <b>Westinhouse Ele Co</b>		Report to Contact: <b>Cynthia Logsdon</b>		Telephone No. / E-mail: <b>647-3171</b>		Quote No.	
Address: <b>5801 Bluff Trl</b>		Sampler's Signature: <i>Randy E. Curless</i>		Analysis (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City: <b>Hookins</b>		Printed Name: <b>Randy E. Curless</b>		Barcode: <b>QG13032</b>			
State: <b>SC</b>		Zip Code: <b>29061</b>					
Project Name:		Project No.:					
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Matrix	
Well #38		7/13/15		0845		Groundwater	
Well #29		7/13/15		0909		Groundwater	
Well #30		7/13/15		0930		Groundwater	
Well #22		7/13/15		0951		Groundwater	
Well #18		7/13/15		1010		Groundwater	
Well #28		7/13/15		1038		Groundwater	
Well #13C		7/13/15		1105		Groundwater	
Well #9		7/13/15		1132		Groundwater	
Well #10		7/13/15		1405		Groundwater	
Well #32		7/13/15		1425		Groundwater	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input checked="" type="checkbox"/> Dispose by Lab <input type="checkbox"/>		Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Toxic <input type="checkbox"/> Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>		Date <b>7/13/15</b> Time <b>1510</b>	
1. Relinquished by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1510</b>		2. Received by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1530</b>	
2. Relinquished by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1530</b>		3. Received by		Date <b>7/13/15</b> Time <b>1530</b>	
3. Relinquished by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1530</b>		4. Laboratory received by <i>[Signature]</i>		Date <b>7-13-15</b> Time <b>1530</b>	
4. Relinquished by		Date		LAB USE ONLY		Receipt Temp. <b>11.2 °C</b>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.							

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: RWP / 7-13-15 Lot #: 0613032

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.2/11.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>5</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>RWP</u> Verified by: _____ Date: <u>7-13-15</u>		

Comments:



## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG15040  
Date Completed: 07/17/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG15040

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QG15040

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #17	Aqueous	07/15/2015 0935	07/15/2015
002	Well #39	Aqueous	07/15/2015 1009	07/15/2015
003	Well #43	Aqueous	07/15/2015 1031	07/15/2015

(3 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QG15040

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #17	Aqueous	Nitrate - N	353.2	12		mg/L	5
002	Well #39	Aqueous	Nitrate - N	353.2	6.8		mg/L	6
003	Well #43	Aqueous	Nitrate - N	353.2	74		mg/L	7

(3 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-001			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 07/15/2015 0935							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	9	07/15/2015 2239	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.18	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-002			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 07/15/2015 1009							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/15/2015 2243	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.8		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-003			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 07/15/2015 1031							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	60	07/15/2015 2254	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	74		1.2	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
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Number 40153

[illegible]

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy**

Document Number: FAD-133 Effective Date: 08-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP/7-15-15 Lot #: 0615040

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>17.7 / 7.7</u> °C / <u>17</u> °C / <u>17</u> °C / <u>17</u> °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/IEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>7-15-15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG16028  
Date Completed: 07/27/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

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## Case Narrative

### Westinghouse Electric Company

Lot Number: QG16028

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QG16028

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #47	Aqueous	07/16/2015 0900	07/16/2015
002	WELL #20	Aqueous	07/16/2015 0934	07/16/2015
003	WELL #27	Aqueous	07/16/2015 0955	07/16/2015
004	WELL #3A	Aqueous	07/16/2015 1035	07/16/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QG16028

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #47	Aqueous	Nitrate - N	353.2	36		mg/L	5
002	WELL #20	Aqueous	Nitrate - N	353.2	0.024		mg/L	6

(2 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-001			
Description: WELL #47				Matrix: Aqueous			
Date Sampled: 07/16/2015 0900							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/16/2015 2113	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	36		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-002			
Description: WELL #20				Matrix: Aqueous			
Date Sampled: 07/16/2015 0934							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2116	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.024		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-003			
Description: WELL #27				Matrix: Aqueous			
Date Sampled: 07/16/2015 0955							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2058	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-004			
Description: WELL #3A				Matrix: Aqueous			
Date Sampled: 07/16/2015 1035							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2104	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 40154**

Client: <u>Westinghouse 843 Co</u>		Report to Contact: <u>Cynthia Longdon</u>		Telephone No. / E-mail: <u>647-3174</u>		Chain No.	
Address: <u>SPOT BLUFF Rd</u>		Sampler's Signature: <u>[Signature]</u>		Analyte (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City: <u>Hopkins</u>		Printed Name: <u>Randy E. Crews Sr</u>		Barcode:		QG16028	
State: <u>SC</u>		Zip Code: <u>29061</u>		Remarks / Cooler I.D.		Groundwater	
Project Name:		Project No.:		Matrix:		No. of Containers by Preservative Type	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Matrix	
Well #47		7/16/15		0900		G	
Well #20		7/16/15		0934		G	
Well #27		7/16/15		0955		G	
Well #3A		7/16/15		1035		G	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/>		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		Date: <u>7/16/15</u> Time: <u>1455</u> Date: <u>7/16/15</u> Time: <u>1522</u> Date: <u>7/16/15</u> Time: <u>1522</u>	
1. Relinquished by: <u>R. Crews</u>		Date: <u>7/16/15</u> Time: <u>1455</u>		1. Received by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>	
2. Relinquished by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>		2. Received by:		Date: <u>7/16/15</u> Time: <u>1522</u>	
3. Relinquished by:		Date: <u>7/16/15</u> Time: <u>1522</u>		3. Received by:		Date: <u>7/16/15</u> Time: <u>1522</u>	
4. Relinquished by:		Date: <u>7/16/15</u> Time: <u>1522</u>		4. Laboratory received by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on (Date/Time) Yes <input type="checkbox"/> No <input type="checkbox"/> Receipt Temp. <u>66</u> °C			

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014



**Enclosure e)**

**GEL Lab Reports**

**Gamma Spectroscopy (Fission & Activation Products)  
Results**



November 07, 2014

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

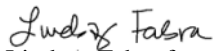
Re: Environmental 2014 - PO 4500633068  
Work Order: 358770

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

  
Lindsay Fabra for  
Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358770

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/6/14 10:05	1000	X	X	X		X	REC
WELL	#3A	10/8/14 09:42	1000	X	X	X		X	REC
WELL	#7	10/7/14 11:33	1000	X	X	X		X	REC
WELL	#10	10/7/14 11:55	1000	X	X	X		X	REC
WELL	#13R	10/7/14 11:10	1000	X	X	X		X	REC
WELL	#14	10/6/14 14:15	1000	X	X	X		X	REC
WELL	#15	10/6/14 12:22	1000	X	X	X		X	REC
WELL	#16	10/6/14 14:30	1000	X	X	X		X	REC
WELL	#17	10/8/14 11:50	1000	X	X	X		X	REC
WELL	#18	10/7/14 10:12	1000	X	X	X		X	REC
WELL	#20	10/7/14 14:07	1000	X	X	X		X	REC
WELL	#22	10/7/14 09:54	1000	X	X	X		X	REC
WELL	#23R	10/6/14 13:50	1000	X	X	X		X	REC
WELL	#24	10/6/14 09:07	1000	X	X	X		X	REC
WELL	#26	10/6/14 10:42	1000	X	X	X		X	REC
WELL	#27	10/6/14 14:45	1000	X	X	X		X	REC
WELL	#28	10/7/14 10:42	1000	X	X	X		X	REC
WELL	#29	10/7/14 09:11	1000	X	X	X		X	REC
WELL	#30	10/7/14 19:31	1000	X	X	X		X	REC
WELL	#32	10/7/14 14:37	1000	X	X	X		X	REC
WELL	#33	10/6/14 11:36	1000	X	X	X		X	REC
WELL	#38	10/7/14 08:47	1000	X	X	X		X	REC
WELL	#39	10/8/14 14:07	1000	X	X	X		X	REC
WELL	#41R	10/6/14 10:22	1000	X	X	X		X	REC
WELL	#43	10/8/14 14:30	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 10/9/14

Received:

Chris George 10/10/14 0910

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Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>Westinghouse</u>			SDG/AR/COC/Work Order: <u>358770</u>		
Received By: <u>CAE</u>			Date Received: <u>10/10/14</u>		
Suspected Hazard Information		Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?				Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>	
Classified Radioactive II or III by RSO?				If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?					
Package, COC, and/or Samples marked as beryllium or asbestos containing?				If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?				Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?					

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	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		/		Preservation Method: Ice bags    Blue ice    Dry ice <u>(None)</u> Other (describe) *all temperatures are recorded in Celsius <u>23°C</u>
2a	Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: <u>13041079102</u> Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	/			
4	Sample containers intact and sealed?	/			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5	Samples requiring chemical preservation at proper pH?	/			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	/			Sample ID's and containers affected:
7	Are Encore containers present?			/	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	/			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11	Number of containers received match number indicated on COC?	/			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			/	
13	COC form is properly signed in relinquished/received sections?	/			
14	Carrier and tracking number.	/			Circle Applicable: FedEx Air    FedEx Ground <u>(JPS)</u> Field Services    Courier    Other  <u>1Z 222 210 01 9022 8251</u> <u>1Z 222 210 01 9514 8269</u>

Comments (Use Continuation Form if needed):



## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 358770 GEL Work Order: 358770

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by

*Ludwig Fabra*

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 358770001  
Matrix: Water  
Collect Date: 06-OCT-14 10:05  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.786	+/-16.6	26.2		pCi/L		MJH1	10/20/14	0713 1428415	1
Americium-241	U	0.0578	+/-29.3	51.4		pCi/L					
Antimony-124	U	-5.09	+/-8.60	15.2		pCi/L					
Antimony-125	U	-4.15	+/-9.16	15.7		pCi/L					
Barium-133	U	-1.68	+/-5.07	7.68		pCi/L					
Barium-140	U	-4.03	+/-9.11	16.5		pCi/L					
Beryllium-7	U	12.1	+/-30.4	56.3		pCi/L					
Bismuth-212	U	-22.7	+/-53.6	86.0		pCi/L					
Bismuth-214		32.2	+/-14.4	12.6		pCi/L					
Cerium-139	U	-2.46	+/-3.49	5.64		pCi/L					
Cerium-141	U	-2.23	+/-6.83	11.4		pCi/L					
Cerium-144	U	-5.83	+/-23.7	39.7		pCi/L					
Cesium-134	U	2.94	+/-3.96	7.22		pCi/L					
Cesium-136	U	-0.886	+/-9.29	17.0		pCi/L					
Cesium-137	U	0.311	+/-3.65	6.83	10.0	pCi/L					
Chromium-51	U	6.64	+/-37.8	68.4		pCi/L					
Cobalt-56	U	-0.664	+/-3.82	6.97		pCi/L					
Cobalt-57	U	-0.383	+/-2.78	4.71		pCi/L					
Cobalt-58	U	1.55	+/-3.36	6.63		pCi/L					
Cobalt-60	U	-3.21	+/-4.72	6.38		pCi/L					
Europium-152	U	-2.01	+/-10.1	17.9		pCi/L					
Europium-154	U	3.37	+/-10.7	20.8		pCi/L					
Europium-155	U	4.23	+/-11.4	20.2		pCi/L					
Iridium-192	U	-1.99	+/-3.37	5.79		pCi/L					
Iron-59	U	0.244	+/-8.99	16.6		pCi/L					
Lead-210	U	-271	+/-1290	2240		pCi/L					
Lead-212		13.4	+/-9.89	10.6		pCi/L					
Lead-214		19.4	+/-12.9	13.6		pCi/L					
Manganese-54	U	-0.649	+/-2.93	5.37		pCi/L					
Mercury-203	U	1.75	+/-3.64	6.76		pCi/L					
Neodymium-147	U	29.8	+/-51.4	96.6		pCi/L					
Neptunium-239	U	19.4	+/-31.5	55.7		pCi/L					
Niobium-94	U	5.44	+/-3.32	6.54		pCi/L					
Niobium-95	U	1.62	+/-3.47	6.81		pCi/L					
Potassium-40	U	41.8	+/-75.7	66.2		pCi/L					
Promethium-144	U	2.98	+/-3.21	6.46		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 358770001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.04	+/-4.10	7.50	pCi/L
Radium-228	U	0.786	+/-16.6	26.2	pCi/L
Ruthenium-106	U	-0.394	+/-30.9	54.7	pCi/L
Silver-110m	U	-2.15	+/-3.41	5.99	pCi/L
Sodium-22	U	1.19	+/-3.78	7.34	pCi/L
Thallium-208	U	-2.35	+/-4.55	7.26	pCi/L
Thorium-230	U	404	+/-1760	3090	pCi/L
Thorium-234	U	86.6	+/-284	472	pCi/L
Tin-113	U	7.60	+/-6.03	8.35	pCi/L
Uranium-235	U	-4.02	+/-27.5	38.5	pCi/L
Uranium-238	U	86.6	+/-284	472	pCi/L
Yttrium-88	U	0.303	+/-4.16	8.24	pCi/L
Zinc-65	U	0.765	+/-6.97	11.7	pCi/L
Zirconium-95	U	-0.959	+/-6.35	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.05	+/-3.50	5.21	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta		15.5	+/-4.09	4.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.5	+/-122	210	300	pCi/L	GXR1	11/06/14	1820	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	358770002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 09:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.4	+/-19.7	39.7		pCi/L		MJH1	10/20/14	0713 1428415	1
Americium-241	U	-61.8	+/-9.95	12.5		pCi/L					
Antimony-124	U	-1.6	+/-11.8	22.7		pCi/L					
Antimony-125	U	-4.15	+/-12.2	21.5		pCi/L					
Barium-133	U	0.192	+/-6.42	10.0		pCi/L					
Barium-140	U	-4.74	+/-9.26	16.7		pCi/L					
Beryllium-7	UI	0.00	+/-51.8	76.1		pCi/L					
Bismuth-212	U	17.7	+/-71.4	130		pCi/L					
Bismuth-214		40.1	+/-20.2	18.9		pCi/L					
Cerium-139	U	1.43	+/-3.95	6.15		pCi/L					
Cerium-141	U	3.52	+/-7.09	12.7		pCi/L					
Cerium-144	U	8.80	+/-23.6	42.1		pCi/L					
Cesium-134	U	-3.26	+/-6.74	9.99		pCi/L					
Cesium-136	U	4.74	+/-13.1	25.0		pCi/L					
Cesium-137	U	2.13	+/-5.31	9.83	10.0	pCi/L					
Chromium-51	U	-3.29	+/-56.1	86.7		pCi/L					
Cobalt-56	U	-1.07	+/-5.68	10.3		pCi/L					
Cobalt-57	U	-0.899	+/-2.90	5.03		pCi/L					
Cobalt-58	U	-2.94	+/-5.37	9.44		pCi/L					
Cobalt-60	U	-6.29	+/-6.12	9.65		pCi/L					
Europium-152	U	10.0	+/-21.8	23.4		pCi/L					
Europium-154	U	-18.2	+/-21.2	23.5		pCi/L					
Europium-155	U	-11.9	+/-14.0	19.8		pCi/L					
Iridium-192	U	-1.88	+/-5.50	8.31		pCi/L					
Iron-59	U	7.10	+/-11.3	21.0		pCi/L					
Lead-210	U	-40.8	+/-104	163		pCi/L					
Lead-212	U	-3.89	+/-11.5	16.5		pCi/L					
Lead-214		27.5	+/-21.0	24.1		pCi/L					
Manganese-54	U	-4.59	+/-5.09	8.62		pCi/L					
Mercury-203	U	4.27	+/-5.02	9.10		pCi/L					
Neodymium-147	U	-41.9	+/-63.0	107		pCi/L					
Neptunium-239	U	-20.4	+/-31.4	53.6		pCi/L					
Niobium-94	U	-1.71	+/-4.98	8.58		pCi/L					
Niobium-95	U	1.21	+/-5.52	10.1		pCi/L					
Potassium-40	U	12.9	+/-72.7	127		pCi/L					
Promethium-144	U	0.461	+/-6.60	9.20		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 358770002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.14	+/-10.7	9.84	pCi/L
Radium-228	U	19.4	+/-19.7	39.7	pCi/L
Ruthenium-106	U	-33.5	+/-45.9	76.8	pCi/L
Silver-110m	U	-1.04	+/-4.97	8.72	pCi/L
Sodium-22	U	-5.72	+/-7.33	8.28	pCi/L
Thallium-208		9.21	+/-10.2	9.03	pCi/L
Thorium-230	U	-4140	+/-928	1200	pCi/L
Thorium-234	U	5.50	+/-106	181	pCi/L
Tin-113	U	5.08	+/-6.89	10.7	pCi/L
Uranium-235	U	0.250	+/-27.8	44.7	pCi/L
Uranium-238	U	5.50	+/-106	181	pCi/L
Yttrium-88	U	-3.4	+/-6.02	10.6	pCi/L
Zinc-65	U	-11	+/-12.9	19.0	pCi/L
Zirconium-95	U	-5.72	+/-10.4	16.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.85	+/-2.69	4.71	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta	U	3.31	+/-2.97	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	17.6	+/-122	211	300	pCi/L	GXR1	11/06/14	1839	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358770003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:33		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.7	+/-25.8	30.1		pCi/L		MJH1	10/20/14	0719 1428415	1
Americium-241	U	12.7	+/-13.8	24.1		pCi/L					
Antimony-124	U	-1.15	+/-7.70	14.6		pCi/L					
Antimony-125	U	-7.46	+/-8.82	14.7		pCi/L					
Barium-133	U	2.09	+/-4.38	7.26		pCi/L					
Barium-140	U	-1.49	+/-6.38	10.2		pCi/L					
Beryllium-7	U	7.93	+/-30.9	56.1		pCi/L					
Bismuth-212	U	7.44	+/-43.1	81.4		pCi/L					
Bismuth-214		36.0	+/-13.4	12.1		pCi/L					
Cerium-139	U	-1.78	+/-3.12	5.18		pCi/L					
Cerium-141	U	-1.93	+/-7.47	10.3		pCi/L					
Cerium-144	U	4.28	+/-19.3	34.0		pCi/L					
Cesium-134	U	-0.281	+/-3.58	6.57		pCi/L					
Cesium-136	U	5.32	+/-8.52	15.3		pCi/L					
Cesium-137	U	2.36	+/-6.52	6.55	10.0	pCi/L					
Chromium-51	U	25.9	+/-37.2	69.5		pCi/L					
Cobalt-56	U	-0.376	+/-3.42	6.25		pCi/L					
Cobalt-57	U	1.86	+/-2.56	4.64		pCi/L					
Cobalt-58	U	-1.57	+/-3.65	6.43		pCi/L					
Cobalt-60	U	-0.0155	+/-3.43	6.56		pCi/L					
Europium-152	U	6.84	+/-9.70	18.2		pCi/L					
Europium-154	U	2.13	+/-10.7	20.8		pCi/L					
Europium-155	U	-0.814	+/-11.3	17.7		pCi/L					
Iridium-192	U	0.442	+/-3.47	6.29		pCi/L					
Iron-59	U	-2.31	+/-7.64	13.4		pCi/L					
Lead-210	U	-207	+/-395	686		pCi/L					
Lead-212	U	8.38	+/-8.95	9.58		pCi/L					
Lead-214	U	17.1	+/-15.6	17.5		pCi/L					
Manganese-54	U	-0.658	+/-3.23	5.83		pCi/L					
Mercury-203	U	1.15	+/-3.52	6.50		pCi/L					
Neodymium-147	U	3.01	+/-42.9	77.2		pCi/L					
Neptunium-239	U	16.3	+/-26.1	47.2		pCi/L					
Niobium-94	U	-0.266	+/-3.32	6.06		pCi/L					
Niobium-95	U	-0.936	+/-4.66	6.94		pCi/L					
Potassium-40	U	31.2	+/-57.1	56.9		pCi/L					
Promethium-144	U	0.180	+/-3.40	6.27		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 358770003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.657	+/-4.47	8.01	pCi/L
Radium-228	U	20.7	+/-25.8	30.1	pCi/L
Ruthenium-106	U	24.8	+/-27.9	56.0	pCi/L
Silver-110m	U	1.97	+/-3.45	6.00	pCi/L
Sodium-22	U	0.970	+/-3.80	7.42	pCi/L
Thallium-208	U	3.86	+/-6.23	5.84	pCi/L
Thorium-230	U	-1400	+/-1220	1680	pCi/L
Thorium-234	U	174	+/-241	201	pCi/L
Tin-113	U	-2.68	+/-4.69	8.02	pCi/L
Uranium-235	U	11.9	+/-29.1	32.4	pCi/L
Uranium-238	U	174	+/-241	201	pCi/L
Yttrium-88	U	1.11	+/-4.23	8.38	pCi/L
Zinc-65	U	3.38	+/-8.62	14.2	pCi/L
Zirconium-95	U	3.30	+/-6.26	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		5.89	+/-3.86	4.88	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta		114	+/-7.63	3.78	5.00	pCi/L					
Alpha	U	4.21	+/-4.23	4.85	5.00	pCi/L	JXH3	11/05/14	1426	1430824	3
Beta		116	+/-6.31	2.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	161	+/-121	199	300	pCi/L	GXR1	11/06/14	1857	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358770003	Client ID:	WNUC001

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358770004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:55		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	15.5	+/-14.6	29.6		pCi/L		MJH1	10/20/14	0720	1428415	1
Americium-241	U	-41.5	+/-20.2	32.8		pCi/L						
Antimony-124	U	0.0168	+/-8.95	17.5		pCi/L						
Antimony-125	U	-0.638	+/-12.2	21.7		pCi/L						
Barium-133	U	2.71	+/-6.17	10.0		pCi/L						
Barium-140	U	-2.91	+/-8.43	15.5		pCi/L						
Beryllium-7	U	12.9	+/-38.8	70.8		pCi/L						
Bismuth-212	U	-67.4	+/-70.7	108		pCi/L						
Bismuth-214		46.7	+/-15.8	17.3		pCi/L						
Cerium-139	U	-1.64	+/-3.53	6.00		pCi/L						
Cerium-141	U	1.26	+/-10.4	12.2		pCi/L						
Cerium-144	U	-1.42	+/-28.2	43.1		pCi/L						
Cesium-134	U	2.52	+/-4.64	8.91		pCi/L						
Cesium-136	U	-1.64	+/-9.87	17.9		pCi/L						
Cesium-137	U	-1.17	+/-5.11	7.62	10.0	pCi/L						
Chromium-51	U	8.79	+/-46.4	84.1		pCi/L						
Cobalt-56	U	0.927	+/-4.95	8.82		pCi/L						
Cobalt-57	U	-1.34	+/-3.07	5.28		pCi/L						
Cobalt-58	U	4.31	+/-7.04	8.80		pCi/L						
Cobalt-60	U	0.799	+/-3.71	7.15		pCi/L						
Europium-152	U	8.70	+/-13.1	22.4		pCi/L						
Europium-154	U	5.91	+/-9.88	20.1		pCi/L						
Europium-155	U	2.42	+/-13.1	23.3		pCi/L						
Iridium-192	U	-1.26	+/-4.38	7.76		pCi/L						
Iron-59	U	4.47	+/-8.02	15.9		pCi/L						
Lead-210	U	-707	+/-627	892		pCi/L						
Lead-212	UI	0.00	+/-10.4	14.4		pCi/L						
Lead-214		51.2	+/-16.7	16.1		pCi/L						
Manganese-54	U	1.49	+/-4.42	8.30		pCi/L						
Mercury-203	U	5.37	+/-4.67	8.49		pCi/L						
Neodymium-147	U	-19.8	+/-56.8	98.8		pCi/L						
Neptunium-239	U	-0.109	+/-34.3	60.2		pCi/L						
Niobium-94	U	-2.15	+/-4.01	6.76		pCi/L						
Niobium-95	U	2.39	+/-5.15	8.32		pCi/L						
Potassium-40	U	34.8	+/-60.0	67.0		pCi/L						
Promethium-144	U	-0.932	+/-5.26	8.07		pCi/L						

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10 Project: WNUC00127  
Sample ID: 358770004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.67	+/-5.39	9.80	pCi/L
Radium-228	U	15.5	+/-14.6	29.6	pCi/L
Ruthenium-106	U	-2.97	+/-43.1	65.6	pCi/L
Silver-110m	U	-0.795	+/-3.98	6.96	pCi/L
Sodium-22	U	1.41	+/-3.56	7.06	pCi/L
Thallium-208	U	-1.19	+/-6.21	8.61	pCi/L
Thorium-230	U	-1200	+/-1460	2370	pCi/L
Thorium-234	U	32.6	+/-194	337	pCi/L
Tin-113	U	-0.902	+/-5.79	10.3	pCi/L
Uranium-235	U	4.22	+/-34.9	43.4	pCi/L
Uranium-238	U	32.6	+/-194	337	pCi/L
Yttrium-88	U	-5.0	+/-4.43	6.91	pCi/L
Zinc-65	U	4.05	+/-8.91	15.3	pCi/L
Zirconium-95	U	-4.91	+/-8.37	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.62	+/-3.25	4.81	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		83.4	+/-5.34	2.49	5.00	pCi/L					
Alpha	U	-0.0534	+/-2.74	4.84	5.00	pCi/L	JXH3	11/05/14	1543	1430824	3
Beta		78.3	+/-6.29	3.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	129	+/-126	211	300	pCi/L	GXR1	11/06/14	1915	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			89.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358770004	Client ID:	WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-22.8	2.23		pCi/L		MJH1	10/20/14	0720	1428415	1
Americium-241	U	2.08	+/-22.8	37.3		pCi/L						
Antimony-124	U	4.67	+/-14.6	20.3		pCi/L						
Antimony-125	U	-4.45	+/-8.68	15.0		pCi/L						
Barium-133	U	2.17	+/-4.24	7.15		pCi/L						
Barium-140	U	3.71	+/-6.72	14.5		pCi/L						
Beryllium-7	U	9.51	+/-31.7	58.1		pCi/L						
Bismuth-212	U	23.1	+/-48.8	82.7		pCi/L						
Bismuth-214		33.3	+/-14.6	12.1		pCi/L						
Cerium-139	U	-1.55	+/-3.03	4.47		pCi/L						
Cerium-141	U	-6.53	+/-7.07	9.57		pCi/L						
Cerium-144	U	-0.767	+/-18.3	32.0		pCi/L						
Cesium-134	U	4.00	+/-3.48	6.78		pCi/L						
Cesium-136	U	5.88	+/-8.32	16.7		pCi/L						
Cesium-137	U	1.18	+/-3.40	6.55	10.0	pCi/L						
Chromium-51	U	-13.6	+/-33.1	58.3		pCi/L						
Cobalt-56	U	-1.63	+/-3.73	6.60		pCi/L						
Cobalt-57	U	-0.827	+/-2.52	4.34		pCi/L						
Cobalt-58	U	-0.927	+/-3.99	6.24		pCi/L						
Cobalt-60	U	4.13	+/-4.97	7.60		pCi/L						
Europium-152	U	-2.22	+/-9.63	17.1		pCi/L						
Europium-154	U	4.91	+/-9.52	19.2		pCi/L						
Europium-155	U	11.0	+/-11.8	18.4		pCi/L						
Iridium-192	U	2.03	+/-3.24	6.14		pCi/L						
Iron-59	U	-6.02	+/-6.69	10.8		pCi/L						
Lead-210	U	327	+/-848	1320		pCi/L						
Lead-212	U	3.97	+/-8.33	8.96		pCi/L						
Lead-214	U	15.9	+/-13.0	17.5		pCi/L						
Manganese-54	U	-1.26	+/-3.26	5.81		pCi/L						
Mercury-203	U	1.06	+/-3.50	6.48		pCi/L						
Neodymium-147	U	-13.6	+/-50.8	76.8		pCi/L						
Neptunium-239	U	-2.85	+/-27.0	47.1		pCi/L						
Niobium-94	U	1.46	+/-3.39	6.48		pCi/L						
Niobium-95	U	-2.56	+/-4.88	6.86		pCi/L						
Potassium-40	U	12.1	+/-53.8	95.9		pCi/L						
Promethium-144	U	1.07	+/-3.29	6.28		pCi/L						

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.29	+/-3.97	6.95	pCi/L
Radium-228	UI	0.00	+/-22.8	2.23	pCi/L
Ruthenium-106	U	4.13	+/-28.5	51.7	pCi/L
Silver-110m	U	-0.656	+/-3.06	5.64	pCi/L
Sodium-22	U	1.79	+/-3.37	6.79	pCi/L
Thallium-208	U	-2.66	+/-4.42	6.95	pCi/L
Thorium-230	U	908	+/-1620	2550	pCi/L
Thorium-234	U	238	+/-274	417	pCi/L
Tin-113	U	-1.42	+/-4.16	7.30	pCi/L
Uranium-235	U	11.3	+/-31.2	29.8	pCi/L
Uranium-238	U	238	+/-274	417	pCi/L
Yttrium-88	U	3.95	+/-3.22	8.50	pCi/L
Zinc-65	U	-2.19	+/-8.93	13.5	pCi/L
Zirconium-95	U	-1.69	+/-6.68	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.05	+/-2.70	5.37	5.00	pCi/L	JXH3	11/04/14	1819	1430824	2
Beta		84.9	+/-7.76	4.89	5.00	pCi/L					
Alpha		4.93	+/-3.48	4.71	5.00	pCi/L	JXH3	11/05/14	1354	1430824	3
Beta		80.5	+/-6.94	3.37	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	191	+/-126	205	300	pCi/L	GXR1	11/06/14	1933	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005

Project: WNUC00127  
Client ID: WNUC001

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358770006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:15		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-20.6	31.9		pCi/L		MJH1	10/20/14	0730	1428415	1
Americium-241	U	8.86	+/-29.3	54.5		pCi/L						
Antimony-124	U	-9.61	+/-9.82	15.5		pCi/L						
Antimony-125	U	-4.7	+/-10.9	18.6		pCi/L						
Barium-133	U	-0.854	+/-5.43	8.37		pCi/L						
Barium-140	U	-5.51	+/-10.4	18.4		pCi/L						
Beryllium-7	U	4.01	+/-36.4	65.0		pCi/L						
Bismuth-212	U	24.0	+/-57.2	109		pCi/L						
Bismuth-214		27.3	+/-14.8	13.1		pCi/L						
Cerium-139	U	-3.52	+/-3.24	5.18		pCi/L						
Cerium-141	U	-1.21	+/-7.40	11.1		pCi/L						
Cerium-144	U	7.72	+/-21.6	38.6		pCi/L						
Cesium-134	U	2.36	+/-3.89	7.75		pCi/L						
Cesium-136	U	2.36	+/-10.1	19.8		pCi/L						
Cesium-137	U	-3.14	+/-3.72	6.21	10.0	pCi/L						
Chromium-51	U	-6.66	+/-47.2	74.6		pCi/L						
Cobalt-56	U	-0.582	+/-4.86	8.08		pCi/L						
Cobalt-57	U	0.190	+/-2.74	4.85		pCi/L						
Cobalt-58	U	-2.26	+/-4.21	7.20		pCi/L						
Cobalt-60	U	0.553	+/-4.49	8.62		pCi/L						
Europium-152	U	8.87	+/-11.6	20.7		pCi/L						
Europium-154	U	-0.674	+/-11.4	21.6		pCi/L						
Europium-155	U	-3.76	+/-13.9	21.7		pCi/L						
Iridium-192	U	3.77	+/-4.09	7.17		pCi/L						
Iron-59	U	5.56	+/-7.88	16.6		pCi/L						
Lead-210	U	-11.7	+/-1450	2330		pCi/L						
Lead-212	U	5.03	+/-9.27	13.4		pCi/L						
Lead-214	U	6.42	+/-13.7	18.6		pCi/L						
Manganese-54	U	-2.52	+/-4.13	6.95		pCi/L						
Mercury-203	U	0.410	+/-3.97	7.26		pCi/L						
Neodymium-147	U	-58	+/-52.1	86.2		pCi/L						
Neptunium-239	U	-14.3	+/-34.5	49.5		pCi/L						
Niobium-94	U	2.76	+/-3.67	7.24		pCi/L						
Niobium-95	U	-4.72	+/-4.10	6.43		pCi/L						
Potassium-40	U	-15.1	+/-61.9	106		pCi/L						
Promethium-144	U	0.717	+/-4.01	7.43		pCi/L						

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358770006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.825	+/-5.34	8.47	pCi/L
Radium-228	UI	0.00	+/-20.6	31.9	pCi/L
Ruthenium-106	U	15.4	+/-36.3	69.5	pCi/L
Silver-110m	U	0.819	+/-3.70	6.99	pCi/L
Sodium-22	U	-0.291	+/-4.01	7.58	pCi/L
Thallium-208	U	5.65	+/-7.49	7.50	pCi/L
Thorium-230	U	-860	+/-1770	2780	pCi/L
Thorium-234	U	-221	+/-288	429	pCi/L
Tin-113	U	-1.09	+/-5.41	8.26	pCi/L
Uranium-235	U	-6.4	+/-27.5	37.9	pCi/L
Uranium-238	U	-221	+/-288	429	pCi/L
Yttrium-88	U	4.80	+/-4.90	11.2	pCi/L
Zinc-65	U	10.1	+/-9.73	18.8	pCi/L
Zirconium-95	U	-0.336	+/-6.61	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.39	+/-2.91	5.46	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta		13.3	+/-3.96	4.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	81.1	+/-117	199	300	pCi/L	GXR1	11/06/14	1951	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

### Notes:

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



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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358770007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:22		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.08	+/-24.6	32.0		pCi/L		MJH1	10/20/14	0739 1428415	1
Americium-241	U	27.6	+/-32.0	52.4		pCi/L					
Antimony-124	U	-6.55	+/-14.4	16.3		pCi/L					
Antimony-125	U	4.40	+/-10.5	19.0		pCi/L					
Barium-133	U	2.10	+/-4.83	7.82		pCi/L					
Barium-140	U	1.19	+/-9.16	18.0		pCi/L					
Beryllium-7	U	-23.6	+/-33.9	59.1		pCi/L					
Bismuth-212	U	48.8	+/-48.0	97.4		pCi/L					
Bismuth-214		30.8	+/-14.1	14.3		pCi/L					
Cerium-139	U	0.721	+/-3.30	5.94		pCi/L					
Cerium-141	U	0.0565	+/-9.05	13.1		pCi/L					
Cerium-144	U	3.69	+/-21.5	38.9		pCi/L					
Cesium-134	U	-0.652	+/-4.39	7.88		pCi/L					
Cesium-136	U	3.39	+/-9.61	16.6		pCi/L					
Cesium-137	U	0.194	+/-3.83	7.07	10.0	pCi/L					
Chromium-51	U	23.1	+/-40.5	74.0		pCi/L					
Cobalt-56	U	-4.46	+/-4.12	6.58		pCi/L					
Cobalt-57	U	1.29	+/-2.84	5.23		pCi/L					
Cobalt-58	U	1.03	+/-3.80	7.21		pCi/L					
Cobalt-60	U	0.269	+/-3.84	7.46		pCi/L					
Europium-152	U	5.47	+/-10.7	19.5		pCi/L					
Europium-154	U	-9.09	+/-10.5	17.6		pCi/L					
Europium-155	U	0.636	+/-12.5	22.7		pCi/L					
Iridium-192	U	0.984	+/-3.64	6.55		pCi/L					
Iron-59	U	0.367	+/-9.13	17.3		pCi/L					
Lead-210	U	719	+/-1260	2230		pCi/L					
Lead-212	U	5.53	+/-10.7	14.4		pCi/L					
Lead-214		23.5	+/-15.2	13.7		pCi/L					
Manganese-54	U	1.54	+/-3.29	6.41		pCi/L					
Mercury-203	U	-2.49	+/-3.83	6.46		pCi/L					
Neodymium-147	U	7.13	+/-62.3	101		pCi/L					
Neptunium-239	U	8.84	+/-30.5	55.8		pCi/L					
Niobium-94	U	2.28	+/-3.41	6.63		pCi/L					
Niobium-95	U	3.38	+/-3.91	7.80		pCi/L					
Potassium-40	U	-49.9	+/-57.9	89.7		pCi/L					
Promethium-144	U	3.37	+/-3.19	6.49		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 15  
Sample ID: 358770007  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.898	+/-4.46	7.67	pCi/L
Radium-228	U	4.08	+/-24.6	32.0	pCi/L
Ruthenium-106	U	2.99	+/-31.9	59.3	pCi/L
Silver-110m	U	-1.16	+/-3.67	6.52	pCi/L
Sodium-22	U	-3.27	+/-3.69	6.17	pCi/L
Thallium-208	U	3.80	+/-4.95	6.80	pCi/L
Thorium-230	U	1290	+/-2100	3310	pCi/L
Thorium-234	U	280	+/-403	495	pCi/L
Tin-113	U	1.04	+/-5.92	9.20	pCi/L
Uranium-235	U	9.98	+/-34.0	43.2	pCi/L
Uranium-238	U	280	+/-403	495	pCi/L
Yttrium-88	U	-0.299	+/-4.94	9.32	pCi/L
Zinc-65	U	3.55	+/-8.38	15.0	pCi/L
Zirconium-95	U	2.67	+/-6.03	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.47	+/-3.23	2.82	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta	242	+/-11.7	4.64	5.00	pCi/L					
Alpha	8.97	+/-4.08	4.78	5.00	pCi/L	JXH3	11/05/14	1544	1430824	3
Beta	238	+/-10.9	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	378	+/-143	221	300	pCi/L	GXR1	11/06/14	2009	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.5	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358770007	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	358770008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.1	+/-27.0	24.7		pCi/L		MJH1	10/20/14	0843 1428415	1
Americium-241	U	11.2	+/-29.3	46.6		pCi/L					
Antimony-124	U	1.84	+/-9.83	19.9		pCi/L					
Antimony-125	U	3.70	+/-9.96	18.8		pCi/L					
Barium-133	U	-0.53	+/-5.80	8.69		pCi/L					
Barium-140	U	0.515	+/-9.20	18.1		pCi/L					
Beryllium-7	U	14.3	+/-35.5	66.9		pCi/L					
Bismuth-212	U	67.9	+/-63.8	99.8		pCi/L					
Bismuth-214		23.6	+/-17.2	14.2		pCi/L					
Cerium-139	U	0.0307	+/-3.71	6.60		pCi/L					
Cerium-141	U	-1.61	+/-7.13	12.6		pCi/L					
Cerium-144	U	15.3	+/-24.1	44.5		pCi/L					
Cesium-134	U	0.363	+/-4.26	7.57		pCi/L					
Cesium-136	U	-11.5	+/-10.4	16.7		pCi/L					
Cesium-137	U	-3.0	+/-4.32	7.23	10.0	pCi/L					
Chromium-51	U	-5.56	+/-44.9	77.4		pCi/L					
Cobalt-56	U	-0.166	+/-4.14	7.74		pCi/L					
Cobalt-57	U	0.00771	+/-3.10	5.59		pCi/L					
Cobalt-58	UI	0.00	+/-4.83	7.31		pCi/L					
Cobalt-60	U	-1.72	+/-4.65	8.16		pCi/L					
Europium-152	U	-6.08	+/-11.8	19.7		pCi/L					
Europium-154	U	2.49	+/-12.1	23.3		pCi/L					
Europium-155	U	7.88	+/-13.4	23.3		pCi/L					
Iridium-192	U	-0.0923	+/-4.35	7.55		pCi/L					
Iron-59	U	-3.22	+/-8.33	14.9		pCi/L					
Lead-210	U	1310	+/-1890	1640		pCi/L					
Lead-212		11.5	+/-11.6	11.0		pCi/L					
Lead-214	U	14.2	+/-16.0	15.5		pCi/L					
Manganese-54	U	0.688	+/-3.96	7.53		pCi/L					
Mercury-203	U	-1.63	+/-4.61	7.88		pCi/L					
Neodymium-147	U	-1.02	+/-57.2	104		pCi/L					
Neptunium-239	U	-5.48	+/-32.1	57.5		pCi/L					
Niobium-94	U	-2.83	+/-3.90	6.47		pCi/L					
Niobium-95	U	-0.163	+/-4.93	8.56		pCi/L					
Potassium-40	U	-22	+/-62.0	104		pCi/L					
Promethium-144	U	3.28	+/-3.93	7.60		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16 Project: WNUC00127  
Sample ID: 358770008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.96	+/-5.18	8.62	pCi/L
Radium-228	U	13.1	+/-27.0	24.7	pCi/L
Ruthenium-106	U	8.49	+/-37.7	69.3	pCi/L
Silver-110m	U	3.23	+/-3.73	7.32	pCi/L
Sodium-22	U	0.810	+/-4.27	8.19	pCi/L
Thallium-208	U	4.88	+/-5.77	7.40	pCi/L
Thorium-230	U	-106	+/-1890	2880	pCi/L
Thorium-234	U	151	+/-349	370	pCi/L
Tin-113	U	-3.21	+/-5.28	9.24	pCi/L
Uranium-235	U	-31.1	+/-28.6	42.8	pCi/L
Uranium-238	U	151	+/-349	370	pCi/L
Yttrium-88	U	-3.41	+/-4.46	7.42	pCi/L
Zinc-65	U	-2.36	+/-9.82	15.0	pCi/L
Zirconium-95	U	4.55	+/-7.69	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.749	+/-2.15	4.71	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta		17.6	+/-3.46	3.44	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	25.6	+/-137	238	300	pCi/L	GXR1	11/06/14	2027	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			78.6	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358770009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 11:50		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.35	+/-17.6	30.6		pCi/L		MJH1	10/20/14	1147 1428415	1
Americium-241	U	2.53	+/-12.7	20.6		pCi/L					
Antimony-124	U	4.16	+/-8.39	18.0		pCi/L					
Antimony-125	U	1.41	+/-9.22	17.2		pCi/L					
Barium-133	U	1.55	+/-5.32	8.73		pCi/L					
Barium-140	U	-0.867	+/-8.12	15.3		pCi/L					
Beryllium-7	U	9.95	+/-39.6	64.6		pCi/L					
Bismuth-212	U	35.6	+/-53.7	104		pCi/L					
Bismuth-214		22.0	+/-11.1	13.1		pCi/L					
Cerium-139	U	0.198	+/-3.88	5.99		pCi/L					
Cerium-141	U	-1.23	+/-6.62	11.6		pCi/L					
Cerium-144	U	21.2	+/-23.2	42.8		pCi/L					
Cesium-134	U	-0.373	+/-4.22	6.61		pCi/L					
Cesium-136	U	3.07	+/-8.86	17.5		pCi/L					
Cesium-137	U	2.15	+/-4.26	7.90	10.0	pCi/L					
Chromium-51	U	-14.7	+/-41.9	70.6		pCi/L					
Cobalt-56	U	-2.77	+/-4.37	7.31		pCi/L					
Cobalt-57	U	3.97	+/-3.00	5.46		pCi/L					
Cobalt-58	U	-2.45	+/-5.03	7.23		pCi/L					
Cobalt-60	U	0.618	+/-4.56	8.05		pCi/L					
Europium-152	U	-5.54	+/-11.2	18.7		pCi/L					
Europium-154	U	-4.17	+/-10.5	19.0		pCi/L					
Europium-155	U	7.16	+/-11.7	21.4		pCi/L					
Iridium-192	U	0.268	+/-4.14	7.20		pCi/L					
Iron-59	U	3.03	+/-4.81	15.3		pCi/L					
Lead-210	U	98.7	+/-266	330		pCi/L					
Lead-212	U	5.59	+/-9.48	13.5		pCi/L					
Lead-214	U	13.6	+/-17.6	15.3		pCi/L					
Manganese-54	U	-1.27	+/-3.64	6.35		pCi/L					
Mercury-203	U	1.10	+/-4.47	7.86		pCi/L					
Neodymium-147	U	11.1	+/-47.4	88.9		pCi/L					
Neptunium-239	U	-2.23	+/-34.9	54.2		pCi/L					
Niobium-94	U	2.27	+/-7.92	6.32		pCi/L					
Niobium-95	U	2.15	+/-4.17	7.96		pCi/L					
Potassium-40	U	1.77	+/-60.1	118		pCi/L					
Promethium-144	U	-1.63	+/-4.92	7.31		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17  
Sample ID: 358770009  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.625	+/-4.35	7.89	pCi/L
Radium-228	U	5.35	+/-17.6	30.6	pCi/L
Ruthenium-106	U	15.3	+/-34.1	64.7	pCi/L
Silver-110m	U	-6.61	+/-4.79	6.00	pCi/L
Sodium-22	U	-1.6	+/-3.68	6.61	pCi/L
Thallium-208	U	0.999	+/-6.80	6.98	pCi/L
Thorium-230	U	1430	+/-1020	1770	pCi/L
Thorium-234	U	51.0	+/-138	218	pCi/L
Tin-113	U	-0.411	+/-4.81	8.76	pCi/L
Uranium-235	U	-19.9	+/-26.7	40.4	pCi/L
Uranium-238	U	51.0	+/-138	218	pCi/L
Yttrium-88	U	2.56	+/-4.57	9.82	pCi/L
Zinc-65	U	4.76	+/-7.45	14.1	pCi/L
Zirconium-95	U	2.25	+/-7.60	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.294	+/-2.83	4.94	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		383	+/-14.6	3.69	5.00	pCi/L					
Alpha		6.20	+/-4.15	4.64	5.00	pCi/L	JXH3	11/05/14	1551	1430824	3
Beta		386	+/-16.3	4.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	828	+/-153	210	300	pCi/L	GXR1	11/06/14	2045	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358770009	Client ID:	WNUC001

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	358770010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:12		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	23.7	+/-13.8	29.9		pCi/L		MJH1	10/20/14	1154 1428415	1
Americium-241	U	-15.6	+/-24.6	42.8		pCi/L					
Antimony-124	U	-1.74	+/-10.3	20.0		pCi/L					
Antimony-125	U	-3.28	+/-12.4	22.0		pCi/L					
Barium-133	U	-8.92	+/-6.57	10.9		pCi/L					
Barium-140	U	-5.06	+/-10.3	18.6		pCi/L					
Beryllium-7	U	62.4	+/-53.8	68.1		pCi/L					
Bismuth-212	U	25.0	+/-75.6	121		pCi/L					
Bismuth-214	U	4.71	+/-11.4	20.0		pCi/L					
Cerium-139	U	0.405	+/-4.06	7.14		pCi/L					
Cerium-141	U	-2.82	+/-9.70	15.4		pCi/L					
Cerium-144	U	-22.7	+/-30.9	47.9		pCi/L					
Cesium-134	U	2.38	+/-5.30	10.3		pCi/L					
Cesium-136	U	-3.76	+/-11.6	20.9		pCi/L					
Cesium-137	U	-0.71	+/-6.08	8.75	10.0	pCi/L					
Chromium-51	U	7.88	+/-50.1	91.7		pCi/L					
Cobalt-56	U	-1.48	+/-5.17	9.37		pCi/L					
Cobalt-57	U	0.0849	+/-3.68	6.50		pCi/L					
Cobalt-58	U	-0.0848	+/-5.45	10.1		pCi/L					
Cobalt-60	U	-0.413	+/-5.22	9.61		pCi/L					
Europium-152	U	-7.53	+/-14.3	25.0		pCi/L					
Europium-154	U	-15.8	+/-11.9	17.2		pCi/L					
Europium-155	U	18.2	+/-15.0	28.0		pCi/L					
Iridium-192	U	2.97	+/-4.87	9.15		pCi/L					
Iron-59	U	10.0	+/-6.79	15.9		pCi/L					
Lead-210	U	394	+/-932	950		pCi/L					
Lead-212	UI	0.00	+/-11.7	16.7		pCi/L					
Lead-214	U	8.00	+/-12.8	22.4		pCi/L					
Manganese-54	U	0.186	+/-4.88	9.10		pCi/L					
Mercury-203	U	0.115	+/-5.28	9.11		pCi/L					
Neodymium-147	U	46.2	+/-71.6	135		pCi/L					
Neptunium-239	U	12.6	+/-37.9	68.0		pCi/L					
Niobium-94	U	1.69	+/-5.60	8.91		pCi/L					
Niobium-95	U	0.131	+/-5.43	9.70		pCi/L					
Potassium-40	U	50.2	+/-65.3	79.2		pCi/L					
Promethium-144	U	-1.2	+/-5.85	9.37		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 358770010  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.0846	+/-6.07	10.9	pCi/L
Radium-228	U	23.7	+/-13.8	29.9	pCi/L
Ruthenium-106	U	-11.9	+/-43.4	75.8	pCi/L
Silver-110m	U	-0.134	+/-4.44	7.96	pCi/L
Sodium-22	U	-6.4	+/-4.32	6.02	pCi/L
Thallium-208	U	-4.86	+/-6.71	9.52	pCi/L
Thorium-230	U	-329	+/-1670	2830	pCi/L
Thorium-234	U	-136	+/-223	386	pCi/L
Tin-113	U	-2.97	+/-6.22	10.9	pCi/L
Uranium-235	U	18.4	+/-35.1	53.2	pCi/L
Uranium-238	U	-136	+/-223	386	pCi/L
Yttrium-88	U	-3.27	+/-4.70	8.06	pCi/L
Zinc-65	U	-0.19	+/-10.3	19.0	pCi/L
Zirconium-95	U	-2.05	+/-9.50	16.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-2.82	+/-6.88	12.5	5.00	pCi/L	JXH3	11/04/14	1857	1430824	2
Beta		167	+/-7.13	4.95	5.00	pCi/L					
Alpha		10.2	+/-6.21	9.51	5.00	pCi/L	JXH3	11/05/14	1935	1430824	3
Beta		155	+/-7.12	6.18	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	249	+/-128	205	300	pCi/L	GXR1	11/06/14	2103	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 358770010

Project: WNUC00127  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	358770011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.15	+/-17.1	29.2		pCi/L		MJH1	10/20/14	1151 1428415	1
Americium-241	U	-3.75	+/-14.5	21.8		pCi/L					
Antimony-124	U	-1.2	+/-7.41	14.6		pCi/L					
Antimony-125	U	-2.59	+/-8.77	15.2		pCi/L					
Barium-133	U	1.11	+/-4.18	7.63		pCi/L					
Barium-140	U	-4.38	+/-8.18	14.5		pCi/L					
Beryllium-7	U	-0.321	+/-31.7	59.1		pCi/L					
Bismuth-212	U	30.0	+/-49.3	97.5		pCi/L					
Bismuth-214	U	1.56	+/-9.27	13.5		pCi/L					
Cerium-139	U	0.952	+/-3.17	5.79		pCi/L					
Cerium-141	U	0.0753	+/-6.19	11.2		pCi/L					
Cerium-144	U	-3.8	+/-20.9	37.3		pCi/L					
Cesium-134	U	-3.21	+/-3.74	6.18		pCi/L					
Cesium-136	U	6.53	+/-9.59	19.3		pCi/L					
Cesium-137	U	4.79	+/-3.84	5.63	10.0	pCi/L					
Chromium-51	U	-19.7	+/-43.5	64.0		pCi/L					
Cobalt-56	U	-0.788	+/-4.31	7.75		pCi/L					
Cobalt-57	U	1.29	+/-2.88	4.78		pCi/L					
Cobalt-58	U	2.45	+/-3.33	6.87		pCi/L					
Cobalt-60	U	2.56	+/-5.36	8.91		pCi/L					
Europium-152	U	8.98	+/-10.4	19.8		pCi/L					
Europium-154	U	8.86	+/-11.0	23.7		pCi/L					
Europium-155	U	5.56	+/-10.2	19.1		pCi/L					
Iridium-192	U	0.785	+/-3.99	6.38		pCi/L					
Iron-59	U	-0.72	+/-6.24	11.7		pCi/L					
Lead-210	U	-206	+/-333	516		pCi/L					
Lead-212	U	3.16	+/-10.1	13.6		pCi/L					
Lead-214	U	-4.45	+/-9.61	15.2		pCi/L					
Manganese-54	U	0.684	+/-3.43	6.54		pCi/L					
Mercury-203	U	0.564	+/-3.80	6.86		pCi/L					
Neodymium-147	U	18.9	+/-46.8	91.3		pCi/L					
Neptunium-239	U	-5.08	+/-26.3	47.4		pCi/L					
Niobium-94	U	-2.41	+/-4.33	6.34		pCi/L					
Niobium-95	U	4.29	+/-3.24	7.10		pCi/L					
Potassium-40	U	25.8	+/-53.9	74.6		pCi/L					
Promethium-144	U	4.39	+/-3.96	7.33		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 358770011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.09	+/-4.55	8.22	pCi/L
Radium-228	U	-3.15	+/-17.1	29.2	pCi/L
Ruthenium-106	U	-12.4	+/-32.9	58.8	pCi/L
Silver-110m	U	1.62	+/-3.17	5.70	pCi/L
Sodium-22	U	2.66	+/-3.91	8.28	pCi/L
Thallium-208	U	4.59	+/-4.91	6.09	pCi/L
Thorium-230	U	-101	+/-1130	1670	pCi/L
Thorium-234	U	46.7	+/-186	241	pCi/L
Tin-113	U	-1.63	+/-4.56	7.83	pCi/L
Uranium-235	U	-8.51	+/-24.5	39.9	pCi/L
Uranium-238	U	46.7	+/-186	241	pCi/L
Yttrium-88	U	-0.739	+/-4.49	8.49	pCi/L
Zinc-65	U	8.48	+/-5.92	14.7	pCi/L
Zirconium-95	U	2.74	+/-6.46	12.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.538	+/-2.06	3.82	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	U	2.20	+/-2.87	4.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	61.3	+/-118	201	300	pCi/L	GXR1	11/06/14	2120	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:54		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	6.53	+/-17.3	32.3		pCi/L		MJH1	10/20/14	1152	1428415	1
Americium-241	U	10.0	+/-36.3	65.1		pCi/L						
Antimony-124	U	-1.68	+/-10.5	20.3		pCi/L						
Antimony-125	U	-0.105	+/-10.1	17.6		pCi/L						
Barium-133	U	3.93	+/-5.15	8.97		pCi/L						
Barium-140	U	-4.7	+/-9.61	17.4		pCi/L						
Beryllium-7	U	-6.06	+/-39.2	69.2		pCi/L						
Bismuth-212	U	5.27	+/-63.5	103		pCi/L						
Bismuth-214	UI	0.00	+/-16.7	14.6		pCi/L						
Cerium-139	U	2.34	+/-3.95	6.97		pCi/L						
Cerium-141	U	0.126	+/-7.91	13.5		pCi/L						
Cerium-144	U	14.3	+/-26.3	46.6		pCi/L						
Cesium-134	U	4.52	+/-3.73	8.23		pCi/L						
Cesium-136	U	-7.82	+/-10.2	17.0		pCi/L						
Cesium-137	U	2.34	+/-3.92	7.20	10.0	pCi/L						
Chromium-51	U	-4.74	+/-46.1	72.6		pCi/L						
Cobalt-56	U	6.52	+/-3.44	8.17		pCi/L						
Cobalt-57	U	-1.33	+/-3.40	5.69		pCi/L						
Cobalt-58	U	-1.05	+/-4.10	7.52		pCi/L						
Cobalt-60	U	2.57	+/-3.59	7.94		pCi/L						
Europium-152	U	1.07	+/-11.3	20.5		pCi/L						
Europium-154	U	5.35	+/-11.0	22.9		pCi/L						
Europium-155	U	4.47	+/-14.3	25.3		pCi/L						
Iridium-192	U	2.89	+/-3.77	7.28		pCi/L						
Iron-59	U	2.75	+/-9.66	18.8		pCi/L						
Lead-210	U	873	+/-1460	2710		pCi/L						
Lead-212	U	7.75	+/-10.4	12.9		pCi/L						
Lead-214	U	13.4	+/-13.8	13.5		pCi/L						
Manganese-54	U	-1.08	+/-4.08	7.41		pCi/L						
Mercury-203	U	-4.07	+/-4.30	7.25		pCi/L						
Neodymium-147	U	0.876	+/-56.3	90.0		pCi/L						
Neptunium-239	U	-22.1	+/-35.4	58.4		pCi/L						
Niobium-94	U	1.48	+/-3.58	7.04		pCi/L						
Niobium-95	U	1.35	+/-4.69	8.61		pCi/L						
Potassium-40	U	40.0	+/-58.8	52.8		pCi/L						
Promethium-144	U	2.51	+/-4.58	8.01		pCi/L						

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.61	+/-4.69	9.29	pCi/L
Radium-228	U	6.53	+/-17.3	32.3	pCi/L
Ruthenium-106	U	11.8	+/-32.5	61.6	pCi/L
Silver-110m	U	0.0981	+/-3.37	5.72	pCi/L
Sodium-22	U	1.65	+/-3.83	7.94	pCi/L
Thallium-208	U	4.82	+/-6.41	6.87	pCi/L
Thorium-230	U	1650	+/-1950	3610	pCi/L
Thorium-234	U	-99.5	+/-314	522	pCi/L
Tin-113	U	-4.35	+/-5.03	8.34	pCi/L
Uranium-235	U	-24.7	+/-32.7	44.9	pCi/L
Uranium-238	U	-99.5	+/-314	522	pCi/L
Yttrium-88	U	0.389	+/-4.25	8.84	pCi/L
Zinc-65	U	2.86	+/-7.96	14.5	pCi/L
Zirconium-95	U	-0.589	+/-9.37	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	6.81	+/-4.07	4.82	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta	77.5	+/-6.43	4.76	5.00	pCi/L					
Alpha	10.5	+/-4.67	4.97	5.00	pCi/L	JXH3	11/05/14	1553	1430824	3
Beta	82.3	+/-5.86	3.42	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	143	+/-124	207	300	pCi/L	GXR1	11/07/14	0522	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358770013  
Matrix: Water  
Collect Date: 06-OCT-14 13:50  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	33.9	+/-24.2	39.7		pCi/L		MJH1	10/20/14	1152 1428415	1
Americium-241	U	-17.9	+/-27.4	42.2		pCi/L					
Antimony-124	U	8.35	+/-8.92	21.3		pCi/L					
Antimony-125	U	-1.1	+/-9.42	17.0		pCi/L					
Barium-133	U	0.412	+/-4.96	8.08		pCi/L					
Barium-140	U	-5.15	+/-8.54	15.0		pCi/L					
Beryllium-7	U	3.44	+/-33.4	61.5		pCi/L					
Bismuth-212	U	-13.8	+/-57.6	99.3		pCi/L					
Bismuth-214	U	-3.17	+/-10.2	16.5		pCi/L					
Cerium-139	U	-0.872	+/-3.50	5.97		pCi/L					
Cerium-141	U	5.40	+/-10.3	11.4		pCi/L					
Cerium-144	U	7.55	+/-21.4	38.7		pCi/L					
Cesium-134	U	0.375	+/-3.71	7.20		pCi/L					
Cesium-136	U	-2.08	+/-9.94	18.2		pCi/L					
Cesium-137	U	-2.16	+/-3.89	6.94	10.0	pCi/L					
Chromium-51	U	12.7	+/-38.5	72.5		pCi/L					
Cobalt-56	U	0.934	+/-4.28	8.25		pCi/L					
Cobalt-57	U	0.135	+/-2.97	5.26		pCi/L					
Cobalt-58	U	-0.231	+/-3.92	7.39		pCi/L					
Cobalt-60	U	3.04	+/-3.63	8.76		pCi/L					
Europium-152	U	8.36	+/-12.0	20.9		pCi/L					
Europium-154	U	4.71	+/-11.1	22.6		pCi/L					
Europium-155	U	4.44	+/-17.6	23.2		pCi/L					
Iridium-192	U	-2.65	+/-3.52	6.06		pCi/L					
Iron-59	U	0.684	+/-8.23	15.8		pCi/L					
Lead-210	U	-396	+/-958	1500		pCi/L					
Lead-212	U	3.93	+/-10.1	14.6		pCi/L					
Lead-214	U	15.1	+/-16.1	16.7		pCi/L					
Manganese-54	U	-0.996	+/-4.06	7.39		pCi/L					
Mercury-203	U	-2.08	+/-3.94	6.97		pCi/L					
Neodymium-147	U	-4.58	+/-51.6	93.5		pCi/L					
Neptunium-239	U	2.41	+/-30.6	54.5		pCi/L					
Niobium-94	U	4.26	+/-3.78	7.83		pCi/L					
Niobium-95	U	-0.765	+/-5.01	8.58		pCi/L					
Potassium-40	U	2.44	+/-55.0	67.7		pCi/L					
Promethium-144	U	1.81	+/-4.22	7.35		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358770013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	7.01	+/-7.19	9.40	pCi/L
Radium-228	U	33.9	+/-24.2	39.7	pCi/L
Ruthenium-106	U	12.6	+/-36.0	67.2	pCi/L
Silver-110m	U	1.69	+/-3.41	6.86	pCi/L
Sodium-22	U	1.74	+/-3.92	8.01	pCi/L
Thallium-208	U	2.84	+/-6.09	6.42	pCi/L
Thorium-230	U	1570	+/-2420	2620	pCi/L
Thorium-234	U	3.81	+/-298	342	pCi/L
Tin-113	U	0.889	+/-4.56	8.51	pCi/L
Uranium-235	U	17.7	+/-33.6	43.4	pCi/L
Uranium-238	U	3.81	+/-298	342	pCi/L
Yttrium-88	U	1.19	+/-4.43	9.34	pCi/L
Zinc-65	U	-6.94	+/-8.97	14.8	pCi/L
Zirconium-95	U	-5.97	+/-7.18	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.38	+/-2.19	4.81	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	U	1.92	+/-2.71	4.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-25.6	+/-115	204	300	pCi/L	GXR1	11/07/14	0540	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	358770014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 09:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.3	+/-17.6	30.6		pCi/L		MJH1	10/20/14	1153 1428415	1
Americium-241	U	-10.6	+/-39.3	56.7		pCi/L					
Antimony-124	U	6.42	+/-12.3	26.5		pCi/L					
Antimony-125	U	-12.2	+/-12.1	19.6		pCi/L					
Barium-133	U	-1.06	+/-6.10	9.45		pCi/L					
Barium-140	U	0.969	+/-11.2	22.4		pCi/L					
Beryllium-7	U	19.7	+/-38.0	72.5		pCi/L					
Bismuth-212	U	-20.6	+/-50.3	91.0		pCi/L					
Bismuth-214	U	3.41	+/-12.9	20.2		pCi/L					
Cerium-139	U	-0.257	+/-3.85	6.57		pCi/L					
Cerium-141	U	-2.09	+/-7.68	13.0		pCi/L					
Cerium-144	U	5.26	+/-26.7	46.7		pCi/L					
Cesium-134	U	-0.49	+/-6.15	9.82		pCi/L					
Cesium-136	U	-2.3	+/-11.2	20.5		pCi/L					
Cesium-137	U	-1.2	+/-3.96	7.28	10.0	pCi/L					
Chromium-51	U	12.6	+/-46.6	86.0		pCi/L					
Cobalt-56	U	0.0639	+/-5.52	9.00		pCi/L					
Cobalt-57	U	0.390	+/-3.30	5.78		pCi/L					
Cobalt-58	U	4.05	+/-4.35	7.91		pCi/L					
Cobalt-60	U	0.517	+/-4.15	8.49		pCi/L					
Europium-152	U	7.18	+/-14.2	22.3		pCi/L					
Europium-154	U	3.54	+/-9.68	21.3		pCi/L					
Europium-155	U	2.28	+/-13.7	24.2		pCi/L					
Iridium-192	U	0.311	+/-4.42	8.04		pCi/L					
Iron-59	U	5.47	+/-11.3	22.3		pCi/L					
Lead-210	U	333	+/-1410	2370		pCi/L					
Lead-212	U	2.38	+/-9.67	14.7		pCi/L					
Lead-214	U	1.35	+/-13.0	19.5		pCi/L					
Manganese-54	U	2.36	+/-4.09	8.27		pCi/L					
Mercury-203	U	-3.41	+/-4.62	7.91		pCi/L					
Neodymium-147	U	28.7	+/-66.5	114		pCi/L					
Neptunium-239	U	6.77	+/-35.8	56.8		pCi/L					
Niobium-94	U	-0.204	+/-3.83	7.19		pCi/L					
Niobium-95	U	2.73	+/-5.10	10.1		pCi/L					
Potassium-40	U	3.22	+/-65.9	116		pCi/L					
Promethium-144	U	2.31	+/-4.23	8.37		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24 Project: WNUC00127  
Sample ID: 358770014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.49	+/-5.15	9.75	pCi/L
Radium-228	U	-3.3	+/-17.6	30.6	pCi/L
Ruthenium-106	U	21.3	+/-39.1	77.5	pCi/L
Silver-110m	U	-0.307	+/-3.67	6.94	pCi/L
Sodium-22	U	1.34	+/-3.44	7.58	pCi/L
Thallium-208	U	1.09	+/-7.51	8.03	pCi/L
Thorium-230	U	976	+/-2160	3560	pCi/L
Thorium-234	U	118	+/-315	477	pCi/L
Tin-113	U	-0.886	+/-5.30	9.45	pCi/L
Uranium-235	U	-10.4	+/-26.2	43.8	pCi/L
Uranium-238	U	118	+/-315	477	pCi/L
Yttrium-88	U	2.11	+/-5.37	11.5	pCi/L
Zinc-65	U	0.115	+/-9.97	18.6	pCi/L
Zirconium-95	U	-3.29	+/-7.52	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.0305	+/-2.20	4.75	5.00	pCi/L	JXH3	11/04/14	1819	1430824	2
Beta	U	2.49	+/-3.11	5.27	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-10.5	+/-121	212	300	pCi/L	GXR1	11/07/14	0557	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358770015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.24	+/-18.0	31.7		pCi/L		MJH1	10/23/14	1127 1428415	1
Americium-241	U	4.28	+/-24.4	39.5		pCi/L					
Antimony-124	U	14.8	+/-12.3	28.2		pCi/L					
Antimony-125	U	14.6	+/-13.6	26.1		pCi/L					
Barium-133	U	-3.23	+/-6.98	10.5		pCi/L					
Barium-140	U	5.65	+/-10.8	23.5		pCi/L					
Beryllium-7	U	36.7	+/-47.3	90.0		pCi/L					
Bismuth-212	U	-63.9	+/-79.9	126		pCi/L					
Bismuth-214	U	5.32	+/-13.7	18.9		pCi/L					
Cerium-139	U	1.35	+/-4.25	7.54		pCi/L					
Cerium-141	U	4.98	+/-14.4	15.0		pCi/L					
Cerium-144	U	5.59	+/-31.7	49.6		pCi/L					
Cesium-134	U	-1.78	+/-5.10	7.86		pCi/L					
Cesium-136	U	-3.87	+/-17.9	27.5		pCi/L					
Cesium-137	U	-2.72	+/-5.97	9.25	10.0	pCi/L					
Chromium-51	U	-2.76	+/-58.0	105		pCi/L					
Cobalt-56	U	1.54	+/-6.21	10.3		pCi/L					
Cobalt-57	U	1.58	+/-3.70	6.65		pCi/L					
Cobalt-58	U	-2.11	+/-5.34	9.58		pCi/L					
Cobalt-60	U	0.945	+/-4.08	8.13		pCi/L					
Europium-152	U	-1.07	+/-14.1	25.4		pCi/L					
Europium-154	U	0.0484	+/-10.6	20.6		pCi/L					
Europium-155	U	2.54	+/-15.1	27.0		pCi/L					
Iridium-192	U	2.81	+/-5.01	9.40		pCi/L					
Iron-59	U	-5.5	+/-10.4	18.3		pCi/L					
Lead-210	U	125	+/-896	1020		pCi/L					
Lead-212	U	5.80	+/-9.77	15.7		pCi/L					
Lead-214	U	10.4	+/-11.8	19.0		pCi/L					
Manganese-54	U	5.22	+/-5.17	9.50		pCi/L					
Mercury-203	U	4.07	+/-6.42	10.2		pCi/L					
Neodymium-147	U	-50.1	+/-86.9	144		pCi/L					
Neptunium-239	U	-13	+/-38.8	67.3		pCi/L					
Niobium-94	U	5.20	+/-4.49	8.86		pCi/L					
Niobium-95	U	-0.98	+/-5.56	9.73		pCi/L					
Potassium-40	U	-27.7	+/-57.0	102		pCi/L					
Promethium-144	U	-1.53	+/-5.54	8.74		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358770015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	6.53	+/-5.81	11.4	pCi/L
Radium-228	U	-9.24	+/-18.0	31.7	pCi/L
Ruthenium-106	U	10.1	+/-45.3	82.6	pCi/L
Silver-110m	U	-3.18	+/-4.70	7.87	pCi/L
Sodium-22	U	-0.789	+/-3.91	7.27	pCi/L
Thallium-208	U	-3.68	+/-6.62	9.48	pCi/L
Thorium-230	U	376	+/-1750	2720	pCi/L
Thorium-234	U	-40	+/-207	364	pCi/L
Tin-113	U	1.15	+/-6.41	11.7	pCi/L
Uranium-235	U	15.2	+/-43.9	50.3	pCi/L
Uranium-238	U	-40	+/-207	364	pCi/L
Yttrium-88	U	3.06	+/-4.27	9.88	pCi/L
Zinc-65	U	-10.2	+/-10.2	16.5	pCi/L
Zirconium-95	U	-6.85	+/-9.29	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.323	+/-2.15	4.71	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		9.21	+/-3.19	4.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	17.2	+/-124	215	300	pCi/L	GXR1	11/07/14	0614	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.3	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	358770016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:45		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.81	+/-16.5	30.0		pCi/L		MJH1	10/20/14	1153 1428415	1
Americium-241	U	-6.99	+/-35.4	57.9		pCi/L					
Antimony-124	U	2.84	+/-20.0	33.8		pCi/L					
Antimony-125	U	9.64	+/-11.6	22.7		pCi/L					
Barium-133	U	0.584	+/-6.00	9.67		pCi/L					
Barium-140	U	-6.45	+/-9.09	15.7		pCi/L					
Beryllium-7	U	-3.07	+/-40.2	71.7		pCi/L					
Bismuth-212	U	39.0	+/-62.2	114		pCi/L					
Bismuth-214	U	14.8	+/-15.1	21.9		pCi/L					
Cerium-139	U	-1.7	+/-3.77	6.34		pCi/L					
Cerium-141	U	-2.11	+/-8.80	13.8		pCi/L					
Cerium-144	U	6.67	+/-23.0	41.7		pCi/L					
Cesium-134	U	-1.86	+/-4.69	8.27		pCi/L					
Cesium-136	U	-15.6	+/-11.5	17.1		pCi/L					
Cesium-137	U	0.131	+/-4.80	8.77	10.0	pCi/L					
Chromium-51	U	-15.3	+/-52.0	88.8		pCi/L					
Cobalt-56	U	1.74	+/-6.14	11.2		pCi/L					
Cobalt-57	U	0.0868	+/-3.68	5.84		pCi/L					
Cobalt-58	U	-0.305	+/-4.26	7.95		pCi/L					
Cobalt-60	U	2.23	+/-5.69	11.4		pCi/L					
Europium-152	U	-7.72	+/-13.8	23.6		pCi/L					
Europium-154	U	1.47	+/-14.0	27.5		pCi/L					
Europium-155	U	-6.31	+/-14.4	22.8		pCi/L					
Iridium-192	U	-0.717	+/-4.59	8.23		pCi/L					
Iron-59	U	1.69	+/-8.42	17.3		pCi/L					
Lead-210	U	843	+/-1660	2900		pCi/L					
Lead-212	U	12.6	+/-11.6	16.6		pCi/L					
Lead-214	U	4.64	+/-14.3	21.6		pCi/L					
Manganese-54	U	2.88	+/-4.54	9.11		pCi/L					
Mercury-203	U	-1.92	+/-5.16	8.42		pCi/L					
Neodymium-147	U	-35.3	+/-69.1	119		pCi/L					
Neptunium-239	U	-28.3	+/-40.6	58.0		pCi/L					
Niobium-94	U	0.236	+/-4.70	8.70		pCi/L					
Niobium-95	U	-0.333	+/-5.65	10.3		pCi/L					
Potassium-40	U	27.2	+/-76.6	97.5		pCi/L					
Promethium-144	U	2.76	+/-5.05	8.83		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27

Sample ID: 358770016

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.31	+/-4.77	8.38	pCi/L
Radium-228	U	-7.81	+/-16.5	30.0	pCi/L
Ruthenium-106	U	4.03	+/-43.6	81.8	pCi/L
Silver-110m	U	0.455	+/-4.34	8.22	pCi/L
Sodium-22	U	-0.529	+/-5.14	9.70	pCi/L
Thallium-208	U	-3.64	+/-5.72	9.39	pCi/L
Thorium-230	U	-324	+/-2050	3330	pCi/L
Thorium-234	U	97.9	+/-584	428	pCi/L
Tin-113	U	5.45	+/-6.35	12.2	pCi/L
Uranium-235	U	4.35	+/-28.2	45.6	pCi/L
Uranium-238	U	97.9	+/-584	428	pCi/L
Yttrium-88	U	-0.427	+/-4.87	9.87	pCi/L
Zinc-65	U	2.52	+/-8.56	17.6	pCi/L
Zirconium-95	U	2.04	+/-8.39	16.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.17	+/-2.66	4.43	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta	U	5.06	+/-3.36	5.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	6.07	+/-118	206	300	pCi/L	GXR1	11/07/14	0631	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358770017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.1	+/-17.9	30.8		pCi/L		MJH1	10/23/14	1125 1428415	1
Americium-241	U	-9.41	+/-34.8	60.4		pCi/L					
Antimony-124	U	0.317	+/-10.2	20.8		pCi/L					
Antimony-125	U	-0.385	+/-10.8	19.4		pCi/L					
Barium-133	U	-2.27	+/-5.44	9.44		pCi/L					
Barium-140	U	0.450	+/-10.2	20.7		pCi/L					
Beryllium-7	U	19.9	+/-36.0	68.9		pCi/L					
Bismuth-212	U	-10	+/-55.9	95.9		pCi/L					
Bismuth-214	U	2.12	+/-12.4	19.5		pCi/L					
Cerium-139	U	-0.0862	+/-4.32	6.51		pCi/L					
Cerium-141	U	1.20	+/-11.0	14.9		pCi/L					
Cerium-144	U	3.11	+/-25.3	43.8		pCi/L					
Cesium-134	U	1.81	+/-4.49	8.83		pCi/L					
Cesium-136	U	-5.93	+/-10.8	18.8		pCi/L					
Cesium-137	U	-2.76	+/-3.81	6.66	10.0	pCi/L					
Chromium-51	U	3.27	+/-49.7	79.7		pCi/L					
Cobalt-56	U	-0.914	+/-4.37	8.03		pCi/L					
Cobalt-57	U	-1.43	+/-3.39	5.67		pCi/L					
Cobalt-58	U	-1.25	+/-4.28	7.81		pCi/L					
Cobalt-60	U	-0.626	+/-3.06	5.83		pCi/L					
Europium-152	U	8.62	+/-14.7	20.8		pCi/L					
Europium-154	U	0.125	+/-11.0	21.2		pCi/L					
Europium-155	U	-1.35	+/-14.6	25.0		pCi/L					
Iridium-192	U	-0.963	+/-4.40	7.81		pCi/L					
Iron-59	U	-3.26	+/-8.60	15.4		pCi/L					
Lead-210	U	547	+/-1470	2690		pCi/L					
Lead-212	U	11.4	+/-11.8	13.2		pCi/L					
Lead-214	U	-3.68	+/-11.0	17.5		pCi/L					
Manganese-54	U	-0.0664	+/-4.17	7.79		pCi/L					
Mercury-203	U	-0.62	+/-4.70	8.42		pCi/L					
Neodymium-147	U	20.8	+/-69.4	129		pCi/L					
Neptunium-239	U	-28.7	+/-35.2	57.2		pCi/L					
Niobium-94	U	1.05	+/-3.63	7.04		pCi/L					
Niobium-95	U	1.83	+/-4.42	8.70		pCi/L					
Potassium-40	U	45.4	+/-65.0	72.9		pCi/L					
Promethium-144	U	-1.85	+/-3.62	6.46		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28

Sample ID: 358770017

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.40	+/-4.88	9.05	pCi/L
Radium-228	U	-6.1	+/-17.9	30.8	pCi/L
Ruthenium-106	U	20.1	+/-34.4	66.3	pCi/L
Silver-110m	U	2.30	+/-3.43	7.02	pCi/L
Sodium-22	U	-0.792	+/-4.05	7.48	pCi/L
Thallium-208	U	5.88	+/-5.25	6.42	pCi/L
Thorium-230	U	837	+/-2340	3760	pCi/L
Thorium-234	U	-18.3	+/-328	510	pCi/L
Tin-113	U	-1.61	+/-5.48	9.61	pCi/L
Uranium-235	U	3.75	+/-34.4	41.8	pCi/L
Uranium-238	U	-18.3	+/-328	510	pCi/L
Yttrium-88	U	2.51	+/-4.57	10.2	pCi/L
Zinc-65	U	-12	+/-9.43	14.2	pCi/L
Zirconium-95	U	-5.26	+/-7.39	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.66	+/-4.03	5.90	5.00	pCi/L	JXH3	11/04/14	1857	1430824	2
Beta		90.0	+/-4.39	3.23	5.00	pCi/L					
Alpha	U	0.808	+/-6.17	11.0	5.00	pCi/L	JXH3	11/05/14	1935	1430824	3
Beta		78.7	+/-4.75	5.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	8.57	+/-122	213	300	pCi/L	MYM1	11/02/14	1158	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358770017	Client ID:	WNUC001

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358770018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:11		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.26	+/-25.7	33.5		pCi/L		MJH1	10/23/14	1125 1428415	1
Americium-241	U	-9.36	+/-24.1	42.7		pCi/L					
Antimony-124	U	6.09	+/-10.3	22.6		pCi/L					
Antimony-125	U	6.23	+/-9.87	19.1		pCi/L					
Barium-133	U	0.175	+/-3.91	6.48		pCi/L					
Barium-140	U	5.71	+/-10.8	21.3		pCi/L					
Beryllium-7	U	9.30	+/-33.2	56.4		pCi/L					
Bismuth-212	U	-18.6	+/-59.4	102		pCi/L					
Bismuth-214	U	9.91	+/-16.7	19.2		pCi/L					
Cerium-139	U	-1.89	+/-3.18	5.30		pCi/L					
Cerium-141	U	3.28	+/-10.4	11.7		pCi/L					
Cerium-144	U	0.367	+/-22.0	38.8		pCi/L					
Cesium-134	U	-1.47	+/-3.86	7.00		pCi/L					
Cesium-136	U	0.315	+/-10.9	20.8		pCi/L					
Cesium-137	U	2.82	+/-3.74	7.67	10.0	pCi/L					
Chromium-51	U	23.7	+/-42.5	81.1		pCi/L					
Cobalt-56	U	-0.39	+/-4.17	7.80		pCi/L					
Cobalt-57	U	-1.37	+/-3.04	5.19		pCi/L					
Cobalt-58	U	1.97	+/-4.15	8.29		pCi/L					
Cobalt-60	U	1.13	+/-3.52	7.45		pCi/L					
Europium-152	U	4.88	+/-9.21	17.9		pCi/L					
Europium-154	U	-3.96	+/-10.9	19.3		pCi/L					
Europium-155	U	4.62	+/-12.1	22.1		pCi/L					
Iridium-192	U	1.04	+/-4.02	7.49		pCi/L					
Iron-59	U	-1.59	+/-9.19	16.8		pCi/L					
Lead-210	U	379	+/-994	1660		pCi/L					
Lead-212	U	4.63	+/-10.8	11.6		pCi/L					
Lead-214	U	8.02	+/-11.3	16.1		pCi/L					
Manganese-54	U	-1.15	+/-3.72	6.76		pCi/L					
Mercury-203	U	3.07	+/-3.94	7.69		pCi/L					
Neodymium-147	U	86.5	+/-135	114		pCi/L					
Neptunium-239	U	-17.1	+/-33.0	56.3		pCi/L					
Niobium-94	U	0.321	+/-3.50	6.68		pCi/L					
Niobium-95	U	-3.4	+/-4.71	7.43		pCi/L					
Potassium-40	UI	0.00	+/-60.9	68.5		pCi/L					
Promethium-144	U	1.09	+/-3.83	7.40		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358770018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.61	+/-4.25	8.09	pCi/L
Radium-228	U	2.26	+/-25.7	33.5	pCi/L
Ruthenium-106	U	-1.71	+/-31.4	56.7	pCi/L
Silver-110m	U	-0.448	+/-3.58	6.73	pCi/L
Sodium-22	U	-1.48	+/-3.82	6.76	pCi/L
Thallium-208	U	0.482	+/-5.05	8.85	pCi/L
Thorium-230	U	-339	+/-1610	2680	pCi/L
Thorium-234	U	-89.3	+/-261	455	pCi/L
Tin-113	U	1.83	+/-4.40	8.43	pCi/L
Uranium-235	U	10.2	+/-32.6	38.4	pCi/L
Uranium-238	U	-89.3	+/-261	455	pCi/L
Yttrium-88	U	4.07	+/-4.04	9.88	pCi/L
Zinc-65	U	1.51	+/-8.49	16.4	pCi/L
Zirconium-95	U	1.02	+/-7.40	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.54	+/-2.83	5.00	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		10.8	+/-2.43	2.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	49.1	+/-120	206	300	pCi/L	MYM1	11/02/14	1215	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 19:31		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.1	+/-18.6	30.5		pCi/L		MJH1	10/23/14	1126 1428415	1
Americium-241	U	-4.32	+/-37.9	60.9		pCi/L					
Antimony-124	U	-0.468	+/-12.2	24.0		pCi/L					
Antimony-125	U	-2.81	+/-11.6	20.5		pCi/L					
Barium-133	U	8.31	+/-11.0	9.71		pCi/L					
Barium-140	U	-5.46	+/-12.5	22.5		pCi/L					
Beryllium-7	U	18.1	+/-39.7	75.0		pCi/L					
Bismuth-212	U	0.444	+/-60.7	108		pCi/L					
Bismuth-214	U	11.2	+/-15.2	21.5		pCi/L					
Cerium-139	U	-2.21	+/-3.61	5.91		pCi/L					
Cerium-141	U	2.23	+/-8.09	14.2		pCi/L					
Cerium-144	U	23.3	+/-26.9	49.0		pCi/L					
Cesium-134	U	5.77	+/-4.35	9.60		pCi/L					
Cesium-136	U	6.17	+/-12.1	24.6		pCi/L					
Cesium-137	U	2.36	+/-4.02	8.16	10.0	pCi/L					
Chromium-51	U	-23.9	+/-47.0	81.6		pCi/L					
Cobalt-56	U	-2.1	+/-5.21	9.25		pCi/L					
Cobalt-57	U	1.92	+/-3.23	5.86		pCi/L					
Cobalt-58	U	0.359	+/-4.47	8.55		pCi/L					
Cobalt-60	U	-2.22	+/-3.96	6.69		pCi/L					
Europium-152	U	-3.26	+/-11.1	19.6		pCi/L					
Europium-154	U	3.88	+/-12.7	26.3		pCi/L					
Europium-155	U	-0.367	+/-13.9	24.3		pCi/L					
Iridium-192	U	-2.47	+/-4.48	7.75		pCi/L					
Iron-59	U	2.49	+/-7.73	16.0		pCi/L					
Lead-210	U	585	+/-1410	2400		pCi/L					
Lead-212	U	2.89	+/-9.28	15.4		pCi/L					
Lead-214	U	-3.24	+/-10.7	17.1		pCi/L					
Manganese-54	U	-1.39	+/-3.81	6.88		pCi/L					
Mercury-203	U	-0.104	+/-4.46	8.12		pCi/L					
Neodymium-147	U	-27.8	+/-59.2	101		pCi/L					
Neptunium-239	U	-1.07	+/-34.0	59.0		pCi/L					
Niobium-94	U	-2.4	+/-3.73	6.52		pCi/L					
Niobium-95	U	7.63	+/-4.31	9.86		pCi/L					
Potassium-40	U	33.7	+/-57.2	83.0		pCi/L					
Promethium-144	U	-0.0923	+/-4.37	8.15		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.94	+/-4.95	9.34	pCi/L
Radium-228	U	-11.1	+/-18.6	30.5	pCi/L
Ruthenium-106	U	-16.6	+/-34.3	61.8	pCi/L
Silver-110m	U	1.80	+/-3.56	7.24	pCi/L
Sodium-22	U	1.37	+/-4.48	9.27	pCi/L
Thallium-208		8.30	+/-6.23	8.04	pCi/L
Thorium-230	U	638	+/-1890	3430	pCi/L
Thorium-234	U	-183	+/-291	493	pCi/L
Tin-113	U	1.93	+/-5.74	10.7	pCi/L
Uranium-235	U	0.375	+/-26.4	45.3	pCi/L
Uranium-238	U	-183	+/-291	493	pCi/L
Yttrium-88	U	-3.53	+/-5.39	9.16	pCi/L
Zinc-65	U	-3.94	+/-9.94	17.4	pCi/L
Zirconium-95	U	5.63	+/-6.89	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	44.6	+/-7.77	4.99	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	39.3	+/-4.33	3.02	5.00	pCi/L					
Alpha	38.3	+/-7.51	4.77	5.00	pCi/L	JXH3	11/07/14	0850	1430824	3
Beta	46.1	+/-4.83	3.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	30.9	+/-123	213	300	pCi/L	MYM1	11/02/14	1231	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	358770020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:37		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	22.2	+/-20.9	42.0		pCi/L		MJH1	10/23/14	1126 1428415	1
Americium-241	U	2.83	+/-7.57	12.0		pCi/L					
Antimony-124	U	-0.423	+/-10.7	21.2		pCi/L					
Antimony-125	U	-2.69	+/-12.9	22.9		pCi/L					
Barium-133	U	5.63	+/-8.74	9.84		pCi/L					
Barium-140	U	0.371	+/-11.9	23.4		pCi/L					
Beryllium-7	U	-18.2	+/-52.1	80.9		pCi/L					
Bismuth-212	U	51.7	+/-71.9	137		pCi/L					
Bismuth-214	UI	0.00	+/-20.2	17.5		pCi/L					
Cerium-139	U	-1.6	+/-4.09	6.02		pCi/L					
Cerium-141	U	8.21	+/-7.63	14.0		pCi/L					
Cerium-144	U	-5.48	+/-22.9	39.8		pCi/L					
Cesium-134	U	-1.98	+/-5.52	9.91		pCi/L					
Cesium-136	U	25.8	+/-16.7	26.4		pCi/L					
Cesium-137	U	0.763	+/-5.19	9.42	10.0	pCi/L					
Chromium-51	U	-44.3	+/-59.7	86.9		pCi/L					
Cobalt-56	U	-3.55	+/-5.57	9.69		pCi/L					
Cobalt-57	U	3.47	+/-2.87	5.33		pCi/L					
Cobalt-58	U	-3.78	+/-5.26	9.11		pCi/L					
Cobalt-60	U	-7.88	+/-6.76	10.5		pCi/L					
Europium-152	U	-22.1	+/-14.6	20.5		pCi/L					
Europium-154	U	13.7	+/-17.8	29.4		pCi/L					
Europium-155	U	-4.31	+/-14.2	20.9		pCi/L					
Iridium-192	U	4.12	+/-4.54	8.64		pCi/L					
Iron-59	U	0.780	+/-11.9	22.2		pCi/L					
Lead-210	U	-30.9	+/-98.0	161		pCi/L					
Lead-212	U	1.97	+/-13.2	13.4		pCi/L					
Lead-214	U	12.3	+/-19.9	22.1		pCi/L					
Manganese-54	U	0.388	+/-5.82	10.7		pCi/L					
Mercury-203	U	-2.49	+/-5.21	8.74		pCi/L					
Neodymium-147	U	-39.4	+/-79.5	137		pCi/L					
Neptunium-239	U	-18.4	+/-30.3	51.8		pCi/L					
Niobium-94	U	-2.67	+/-5.36	9.10		pCi/L					
Niobium-95	U	1.48	+/-6.09	11.1		pCi/L					
Potassium-40	U	-27.4	+/-73.2	120		pCi/L					
Promethium-144	U	-1.76	+/-6.88	9.41		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 358770020

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.65	+/-5.63	9.93	pCi/L
Radium-228	U	22.2	+/-20.9	42.0	pCi/L
Ruthenium-106	U	26.0	+/-45.6	85.5	pCi/L
Silver-110m	U	0.676	+/-5.04	9.12	pCi/L
Sodium-22	U	4.62	+/-6.24	10.4	pCi/L
Thallium-208	U	1.13	+/-8.51	9.42	pCi/L
Thorium-230	U	-432	+/-811	1210	pCi/L
Thorium-234	U	52.1	+/-139	183	pCi/L
Tin-113	U	7.93	+/-6.33	9.96	pCi/L
Uranium-235	U	-15.2	+/-28.1	44.1	pCi/L
Uranium-238	U	52.1	+/-139	183	pCi/L
Yttrium-88	U	5.23	+/-5.57	12.6	pCi/L
Zinc-65	U	-0.226	+/-10.9	20.2	pCi/L
Zirconium-95	U	-15	+/-11.4	16.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.51	+/-3.22	4.76	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta		232	+/-9.00	2.66	5.00	pCi/L					
Alpha	U	-0.566	+/-3.18	4.82	5.00	pCi/L	JXH3	11/06/14	0957	1430824	3
Beta		222	+/-9.10	4.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	320	+/-131	206	300	pCi/L	MYM1	11/02/14	1248	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 32  
Sample ID: 358770020

Project: WNUC00127  
Client ID: WNUC001

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	358770021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:36		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-22.3	+/-18.1	27.8		pCi/L		MJH1	10/24/14	0635 1428419	1
Americium-241	U	10.3	+/-24.2	39.3		pCi/L					
Antimony-124	U	-9.23	+/-10.4	17.2		pCi/L					
Antimony-125	U	9.77	+/-18.8	20.7		pCi/L					
Barium-133	U	0.0466	+/-5.99	9.20		pCi/L					
Barium-140	U	3.76	+/-11.4	23.7		pCi/L					
Beryllium-7	U	34.6	+/-45.5	78.7		pCi/L					
Bismuth-212	U	-21.9	+/-60.4	105		pCi/L					
Bismuth-214	UI	0.00	+/-18.1	15.3		pCi/L					
Cerium-139	U	-0.603	+/-3.87	6.91		pCi/L					
Cerium-141	U	-6.68	+/-9.56	14.1		pCi/L					
Cerium-144	U	16.9	+/-27.5	45.9		pCi/L					
Cesium-134	U	4.74	+/-4.24	7.90		pCi/L					
Cesium-136	U	-6.19	+/-13.1	23.4		pCi/L					
Cesium-137	U	-1.31	+/-4.38	7.73	10.0	pCi/L					
Chromium-51	U	10.4	+/-48.8	87.2		pCi/L					
Cobalt-56	U	-0.521	+/-4.32	7.76		pCi/L					
Cobalt-57	U	-1.67	+/-3.30	5.47		pCi/L					
Cobalt-58	U	0.161	+/-4.05	7.47		pCi/L					
Cobalt-60	U	1.95	+/-4.91	9.61		pCi/L					
Europium-152	U	-2.24	+/-11.9	20.6		pCi/L					
Europium-154	U	2.49	+/-13.5	25.8		pCi/L					
Europium-155	U	-1.67	+/-12.6	21.5		pCi/L					
Iridium-192	U	1.34	+/-4.69	8.40		pCi/L					
Iron-59	U	-2.02	+/-10.8	19.8		pCi/L					
Lead-210	U	695	+/-760	1250		pCi/L					
Lead-212	U	-1.1	+/-9.43	15.4		pCi/L					
Lead-214		21.0	+/-16.2	15.9		pCi/L					
Manganese-54	U	1.85	+/-4.59	8.56		pCi/L					
Mercury-203	U	-3.63	+/-5.15	8.70		pCi/L					
Neodymium-147	U	-40.4	+/-76.1	134		pCi/L					
Neptunium-239	U	-7.87	+/-33.5	56.5		pCi/L					
Niobium-94	U	-2.49	+/-3.92	6.67		pCi/L					
Niobium-95	U	1.86	+/-4.66	7.89		pCi/L					
Potassium-40	U	-51.7	+/-73.7	112		pCi/L					
Promethium-144	U	4.31	+/-3.94	7.87		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 33 Project: WNUC00127  
Sample ID: 358770021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.935	+/-5.09	9.24	pCi/L
Radium-228	U	-22.3	+/-18.1	27.8	pCi/L
Ruthenium-106	U	-12.8	+/-37.6	66.5	pCi/L
Silver-110m	U	-0.878	+/-4.02	7.18	pCi/L
Sodium-22	U	1.02	+/-4.79	9.19	pCi/L
Thallium-208	U	-3.53	+/-6.30	9.68	pCi/L
Thorium-230	U	791	+/-1510	2460	pCi/L
Thorium-234	U	14.8	+/-281	350	pCi/L
Tin-113	U	-0.447	+/-5.39	9.40	pCi/L
Uranium-235	U	-18.9	+/-29.4	43.8	pCi/L
Uranium-238	U	14.8	+/-281	350	pCi/L
Yttrium-88	U	0.0457	+/-5.21	10.2	pCi/L
Zinc-65	U	-9.23	+/-11.5	15.8	pCi/L
Zirconium-95	U	4.91	+/-7.97	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.325	+/-2.02	4.68	5.00	pCi/L	JXH3	11/03/14	1650	1430825	2
Beta		5.26	+/-2.71	3.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-36.7	+/-118	209	300	pCi/L	MYM1	11/02/14	1305	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	358770022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 08:47		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.87	+/-21.4	31.9		pCi/L		MJH1	10/24/14	0635 1428419	1
Americium-241	U	4.12	+/-12.1	19.5		pCi/L					
Antimony-124	U	4.50	+/-8.02	17.4		pCi/L					
Antimony-125	U	7.57	+/-8.73	17.0		pCi/L					
Barium-133	U	-6.03	+/-6.56	8.07		pCi/L					
Barium-140	U	3.57	+/-11.1	21.9		pCi/L					
Beryllium-7	U	14.0	+/-35.6	66.3		pCi/L					
Bismuth-212	U	-17.3	+/-50.4	86.7		pCi/L					
Bismuth-214		28.2	+/-13.2	14.9		pCi/L					
Cerium-139	U	-2.19	+/-3.03	5.24		pCi/L					
Cerium-141	U	3.86	+/-7.33	12.1		pCi/L					
Cerium-144	U	13.9	+/-21.8	37.9		pCi/L					
Cesium-134	U	0.457	+/-3.95	7.43		pCi/L					
Cesium-136	U	-0.389	+/-10.5	19.3		pCi/L					
Cesium-137	U	2.75	+/-4.13	7.77	10.0	pCi/L					
Chromium-51	U	14.1	+/-42.7	76.0		pCi/L					
Cobalt-56	U	1.90	+/-4.47	8.53		pCi/L					
Cobalt-57	U	0.104	+/-2.71	4.59		pCi/L					
Cobalt-58	U	-2.06	+/-4.21	7.44		pCi/L					
Cobalt-60	U	-1.24	+/-4.06	7.40		pCi/L					
Europium-152	U	1.06	+/-10.6	18.6		pCi/L					
Europium-154	U	-0.988	+/-9.79	18.6		pCi/L					
Europium-155	U	-7.37	+/-12.3	18.4		pCi/L					
Iridium-192	U	-2.55	+/-3.79	6.29		pCi/L					
Iron-59	U	1.55	+/-10.1	16.3		pCi/L					
Lead-210	U	-31.8	+/-267	405		pCi/L					
Lead-212	U	3.67	+/-8.49	12.1		pCi/L					
Lead-214	U	10.9	+/-12.2	16.9		pCi/L					
Manganese-54	U	-2.22	+/-3.97	6.92		pCi/L					
Mercury-203	U	3.80	+/-6.76	7.39		pCi/L					
Neodymium-147	U	-15.4	+/-69.0	122		pCi/L					
Neptunium-239	U	-5.56	+/-28.0	46.9		pCi/L					
Niobium-94	U	-1.32	+/-3.60	6.18		pCi/L					
Niobium-95	U	0.413	+/-4.43	8.25		pCi/L					
Potassium-40	U	32.4	+/-71.8	60.0		pCi/L					
Promethium-144	U	2.69	+/-3.88	7.29		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	358770022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.57	+/-4.59	7.98	pCi/L
Radium-228	U	-5.87	+/-21.4	31.9	pCi/L
Ruthenium-106	U	-4.9	+/-33.3	58.9	pCi/L
Silver-110m	U	-4.01	+/-3.86	6.20	pCi/L
Sodium-22	U	-0.291	+/-3.47	6.61	pCi/L
Thallium-208	U	-0.608	+/-5.53	8.30	pCi/L
Thorium-230	U	793	+/-905	1580	pCi/L
Thorium-234	U	13.8	+/-165	169	pCi/L
Tin-113	U	-4.17	+/-4.66	7.99	pCi/L
Uranium-235	U	11.8	+/-20.5	34.8	pCi/L
Uranium-238	U	13.8	+/-165	169	pCi/L
Yttrium-88	U	3.76	+/-4.96	10.6	pCi/L
Zinc-65	U	-12.2	+/-9.80	15.3	pCi/L
Zirconium-95	U	-2.01	+/-7.53	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.199	+/-2.20	4.90	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		4.41	+/-2.60	3.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-14.8	+/-119	209	300	pCi/L	MYM1	11/02/14	1321	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358770023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.77	+/-19.9	34.1		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-51.3	+/-22.7	36.7		pCi/L					
Antimony-124	U	2.32	+/-10.5	20.5		pCi/L					
Antimony-125	U	-0.512	+/-10.9	19.1		pCi/L					
Barium-133	U	-0.832	+/-6.78	8.77		pCi/L					
Barium-140	U	-0.088	+/-12.2	22.6		pCi/L					
Beryllium-7	U	-1.31	+/-51.8	67.3		pCi/L					
Bismuth-212	U	34.2	+/-56.6	107		pCi/L					
Bismuth-214		34.6	+/-16.8	13.7		pCi/L					
Cerium-139	U	-1.1	+/-3.62	6.14		pCi/L					
Cerium-141	U	9.32	+/-8.60	13.8		pCi/L					
Cerium-144	U	-0.407	+/-25.5	44.2		pCi/L					
Cesium-134	U	-4.67	+/-4.65	7.53		pCi/L					
Cesium-136	U	-4.21	+/-11.3	20.0		pCi/L					
Cesium-137	U	-0.404	+/-5.03	7.63	10.0	pCi/L					
Chromium-51	U	41.6	+/-44.9	83.5		pCi/L					
Cobalt-56	U	-1.59	+/-6.22	8.11		pCi/L					
Cobalt-57	U	-1.48	+/-3.15	5.38		pCi/L					
Cobalt-58	U	-2.2	+/-4.57	7.79		pCi/L					
Cobalt-60	U	-1.63	+/-4.43	7.74		pCi/L					
Europium-152	U	-0.437	+/-14.2	22.3		pCi/L					
Europium-154	U	3.92	+/-12.7	23.9		pCi/L					
Europium-155	U	-14.1	+/-15.2	21.8		pCi/L					
Iridium-192	U	1.03	+/-4.04	7.26		pCi/L					
Iron-59	U	2.70	+/-9.57	18.0		pCi/L					
Lead-210	U	88.9	+/-626	990		pCi/L					
Lead-212	U	3.97	+/-9.27	12.1		pCi/L					
Lead-214		18.6	+/-15.3	16.8		pCi/L					
Manganese-54	U	-1.94	+/-3.94	6.40		pCi/L					
Mercury-203	U	-0.412	+/-4.75	8.36		pCi/L					
Neodymium-147	U	20.2	+/-67.0	124		pCi/L					
Neptunium-239	U	3.35	+/-33.8	59.1		pCi/L					
Niobium-94	U	1.56	+/-4.13	7.55		pCi/L					
Niobium-95	U	6.34	+/-5.42	9.39		pCi/L					
Potassium-40	U	49.6	+/-61.5	74.0		pCi/L					
Promethium-144	U	-0.168	+/-3.79	6.78		pCi/L					



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## Certificate of Analysis

Report Date: November 7, 2014

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

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358770023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.863	+/-4.91	8.50	pCi/L
Radium-228	U	7.77	+/-19.9	34.1	pCi/L
Ruthenium-106	U	-3.05	+/-32.5	58.5	pCi/L
Silver-110m	U	0.134	+/-4.56	7.03	pCi/L
Sodium-22	U	1.70	+/-4.43	8.45	pCi/L
Thallium-208	U	5.91	+/-6.54	6.66	pCi/L
Thorium-230	U	-3610	+/-1550	2490	pCi/L
Thorium-234	U	4.66	+/-207	358	pCi/L
Tin-113	U	-0.437	+/-5.70	9.94	pCi/L
Uranium-235	U	21.8	+/-33.8	42.0	pCi/L
Uranium-238	U	4.66	+/-207	358	pCi/L
Yttrium-88	U	-0.0521	+/-5.10	9.57	pCi/L
Zinc-65	U	5.33	+/-9.19	15.8	pCi/L
Zirconium-95	U	-13	+/-10.1	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.78	+/-3.66	4.92	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		25.5	+/-4.08	3.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	137	+/-126	210	300	pCi/L	MYM1	11/02/14	1338	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 358770024  
Matrix: Water  
Collect Date: 06-OCT-14 10:22  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-12.5	+/-14.0	20.5		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-2.09	+/-11.7	17.7		pCi/L					
Antimony-124	U	2.05	+/-8.42	16.9		pCi/L					
Antimony-125	U	0.689	+/-8.11	14.4		pCi/L					
Barium-133	U	-0.378	+/-4.16	6.36		pCi/L					
Barium-140	U	-0.0273	+/-9.17	17.7		pCi/L					
Beryllium-7	U	0.732	+/-28.3	52.5		pCi/L					
Bismuth-212	U	-15.6	+/-43.5	77.0		pCi/L					
Bismuth-214		21.9	+/-11.7	11.5		pCi/L					
Cerium-139	U	-0.841	+/-2.68	4.71		pCi/L					
Cerium-141	U	2.14	+/-6.61	10.7		pCi/L					
Cerium-144	U	-4.88	+/-18.5	30.4		pCi/L					
Cesium-134	U	2.17	+/-3.24	6.40		pCi/L					
Cesium-136	U	-3.79	+/-9.87	17.2		pCi/L					
Cesium-137	U	0.994	+/-2.78	5.36	10.0	pCi/L					
Chromium-51	U	18.5	+/-36.5	66.6		pCi/L					
Cobalt-56	U	2.91	+/-3.63	7.16		pCi/L					
Cobalt-57	U	0.0212	+/-2.24	4.04		pCi/L					
Cobalt-58	U	4.19	+/-3.39	6.54		pCi/L					
Cobalt-60	U	0.054	+/-3.67	6.58		pCi/L					
Europium-152	U	-2.35	+/-8.56	14.8		pCi/L					
Europium-154	U	-5.8	+/-9.10	16.0		pCi/L					
Europium-155	U	1.29	+/-9.22	16.3		pCi/L					
Iridium-192	U	0.433	+/-3.43	6.09		pCi/L					
Iron-59	U	-6.46	+/-7.58	12.2		pCi/L					
Lead-210	U	82.0	+/-438	391		pCi/L					
Lead-212	U	5.47	+/-6.43	10.7		pCi/L					
Lead-214		19.5	+/-11.7	11.0		pCi/L					
Manganese-54	U	-0.618	+/-3.24	5.79		pCi/L					
Mercury-203	U	0.428	+/-3.64	6.47		pCi/L					
Neodymium-147	U	-9.84	+/-51.7	94.7		pCi/L					
Neptunium-239	U	-14.3	+/-25.4	38.9		pCi/L					
Niobium-94	U	-0.178	+/-3.24	5.34		pCi/L					
Niobium-95	U	3.45	+/-3.69	7.31		pCi/L					
Potassium-40	U	30.9	+/-64.6	58.4		pCi/L					
Promethium-144	U	1.23	+/-3.50	5.79		pCi/L					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 358770024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.21	+/-3.73	6.64	pCi/L
Radium-228	U	-12.5	+/-14.0	20.5	pCi/L
Ruthenium-106	U	-10.2	+/-25.4	45.2	pCi/L
Silver-110m	U	-0.921	+/-2.72	4.87	pCi/L
Sodium-22	U	-1.7	+/-3.20	5.70	pCi/L
Thallium-208	U	0.759	+/-5.23	5.27	pCi/L
Thorium-230	U	1390	+/-1370	1490	pCi/L
Thorium-234	U	116	+/-145	207	pCi/L
Tin-113	U	-0.582	+/-3.70	6.45	pCi/L
Uranium-235	U	-9.35	+/-21.9	33.8	pCi/L
Uranium-238	U	116	+/-145	207	pCi/L
Yttrium-88	U	1.75	+/-3.45	7.36	pCi/L
Zinc-65	U	-2.21	+/-7.64	11.4	pCi/L
Zirconium-95	U	-0.97	+/-5.90	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.31	+/-2.75	4.92	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		17.3	+/-4.04	4.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.3	+/-121	208	300	pCi/L	MYM1	11/02/14	1354	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	358770025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.48	+/-16.3	27.1		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-10.6	+/-11.1	19.0		pCi/L					
Antimony-124	U	-1.41	+/-9.86	15.4		pCi/L					
Antimony-125	U	-1.66	+/-9.58	14.9		pCi/L					
Barium-133	U	-1.78	+/-4.75	7.28		pCi/L					
Barium-140	U	2.53	+/-7.50	15.1		pCi/L					
Beryllium-7	U	2.36	+/-31.7	57.7		pCi/L					
Bismuth-212	U	26.7	+/-46.8	88.2		pCi/L					
Bismuth-214		17.8	+/-12.1	11.6		pCi/L					
Cerium-139	U	1.59	+/-2.99	5.35		pCi/L					
Cerium-141	U	2.85	+/-6.30	11.2		pCi/L					
Cerium-144	U	-30.8	+/-19.4	31.6		pCi/L					
Cesium-134	U	1.73	+/-3.63	6.68		pCi/L					
Cesium-136	U	-7.06	+/-9.38	16.2		pCi/L					
Cesium-137	U	0.388	+/-3.26	5.95	10.0	pCi/L					
Chromium-51	U	-2.12	+/-34.7	59.8		pCi/L					
Cobalt-56	U	0.749	+/-3.17	5.91		pCi/L					
Cobalt-57	U	-0.184	+/-2.40	4.21		pCi/L					
Cobalt-58	U	-1.08	+/-4.00	6.27		pCi/L					
Cobalt-60	U	2.68	+/-4.95	7.75		pCi/L					
Europium-152	U	0.618	+/-10.0	17.3		pCi/L					
Europium-154	U	2.59	+/-8.38	16.6		pCi/L					
Europium-155	U	0.667	+/-9.75	17.3		pCi/L					
Iridium-192	U	0.0254	+/-3.64	6.27		pCi/L					
Iron-59	U	-0.69	+/-7.44	13.8		pCi/L					
Lead-210	U	16.4	+/-287	293		pCi/L					
Lead-212	U	-1.65	+/-7.37	11.4		pCi/L					
Lead-214		14.5	+/-13.1	13.4		pCi/L					
Manganese-54	U	2.10	+/-3.49	6.57		pCi/L					
Mercury-203	U	-0.591	+/-4.17	6.22		pCi/L					
Neodymium-147	U	40.0	+/-55.8	106		pCi/L					
Neptunium-239	U	12.9	+/-24.7	44.7		pCi/L					
Niobium-94	U	0.915	+/-4.18	5.79		pCi/L					
Niobium-95	U	-0.144	+/-4.02	7.15		pCi/L					
Potassium-40	U	-32.7	+/-45.6	82.1		pCi/L					
Promethium-144	U	-3.72	+/-3.46	5.61		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43 Project: WNUC00127  
Sample ID: 358770025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.07	+/-4.01	7.40	pCi/L
Radium-228	U	8.48	+/-16.3	27.1	pCi/L
Ruthenium-106	U	-7.21	+/-31.4	55.4	pCi/L
Silver-110m	U	0.0158	+/-2.92	5.31	pCi/L
Sodium-22	U	1.01	+/-2.97	5.92	pCi/L
Thallium-208	U	-2.22	+/-4.52	6.74	pCi/L
Thorium-230	U	46.2	+/-814	1460	pCi/L
Thorium-234	U	-83.7	+/-118	190	pCi/L
Tin-113	U	4.39	+/-4.17	8.06	pCi/L
Uranium-235	U	-20	+/-24.1	34.9	pCi/L
Uranium-238	U	-83.7	+/-118	190	pCi/L
Yttrium-88	U	-0.185	+/-3.82	7.44	pCi/L
Zinc-65	U	-9.92	+/-8.00	13.0	pCi/L
Zirconium-95	U	2.32	+/-6.45	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.673	+/-1.94	4.59	5.00	pCi/L	JXH3	11/03/14	1653	1430825	2
Beta	U	3.08	+/-2.66	4.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	102	+/-124	210	300	pCi/L	MYM1	11/02/14	1411	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

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

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	358770026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:00		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.49	+/-15.8	30.3		pCi/L		MJH1	10/24/14	0637 1428419	1
Americium-241	U	-2.36	+/-5.46	8.48		pCi/L					
Antimony-124	U	-0.689	+/-9.89	19.1		pCi/L					
Antimony-125	U	2.00	+/-8.64	15.5		pCi/L					
Barium-133	U	-2.77	+/-5.28	7.65		pCi/L					
Barium-140	U	5.34	+/-11.1	23.0		pCi/L					
Beryllium-7	U	-18.5	+/-30.6	53.6		pCi/L					
Bismuth-212	U	10.7	+/-57.8	93.0		pCi/L					
Bismuth-214		23.6	+/-15.0	13.1		pCi/L					
Cerium-139	U	-0.262	+/-3.03	5.09		pCi/L					
Cerium-141	U	-3.62	+/-6.13	10.1		pCi/L					
Cerium-144	U	-4.83	+/-17.4	29.4		pCi/L					
Cesium-134	U	-0.555	+/-4.37	7.01		pCi/L					
Cesium-136	U	-8.77	+/-12.4	21.0		pCi/L					
Cesium-137	U	2.62	+/-3.95	7.58	10.0	pCi/L					
Chromium-51	U	6.11	+/-40.3	71.9		pCi/L					
Cobalt-56	U	-0.481	+/-5.24	8.37		pCi/L					
Cobalt-57	U	-0.583	+/-2.08	3.54		pCi/L					
Cobalt-58	U	1.16	+/-4.63	7.53		pCi/L					
Cobalt-60	U	-3.0	+/-4.04	6.99		pCi/L					
Europium-152	U	-8.57	+/-11.1	16.7		pCi/L					
Europium-154	U	6.09	+/-13.4	22.9		pCi/L					
Europium-155	U	-4.23	+/-8.18	13.8		pCi/L					
Iridium-192	U	1.78	+/-3.78	6.87		pCi/L					
Iron-59	U	4.48	+/-9.46	18.5		pCi/L					
Lead-210	U	-21.8	+/-70.3	123		pCi/L					
Lead-212	U	1.49	+/-8.50	10.1		pCi/L					
Lead-214	U	8.74	+/-12.6	14.8		pCi/L					
Manganese-54	U	-0.258	+/-4.26	6.84		pCi/L					
Mercury-203	U	1.22	+/-3.98	7.19		pCi/L					
Neodymium-147	U	-5.31	+/-68.6	125		pCi/L					
Neptunium-239	U	-27.5	+/-22.0	35.1		pCi/L					
Niobium-94	U	5.24	+/-4.23	5.76		pCi/L					
Niobium-95	U	0.256	+/-4.55	8.20		pCi/L					
Potassium-40	U	13.7	+/-50.1	73.0		pCi/L					
Promethium-144	U	1.59	+/-3.92	6.50		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 358770026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.12	+/-4.23	7.94	pCi/L
Radium-228	U	5.49	+/-15.8	30.3	pCi/L
Ruthenium-106	U	20.6	+/-23.1	64.1	pCi/L
Silver-110m	U	-1.27	+/-3.83	6.69	pCi/L
Sodium-22	U	2.15	+/-4.73	7.80	pCi/L
Thallium-208	U	-1.75	+/-4.51	7.38	pCi/L
Thorium-230	U	-479	+/-576	801	pCi/L
Thorium-234	U	79.2	+/-73.2	84.5	pCi/L
Tin-113	U	-0.335	+/-4.97	8.63	pCi/L
Uranium-235	U	-5.19	+/-22.5	33.3	pCi/L
Uranium-238	U	79.2	+/-73.2	84.5	pCi/L
Yttrium-88	U	4.64	+/-5.11	11.1	pCi/L
Zinc-65	U	-10.3	+/-11.8	15.9	pCi/L
Zirconium-95	U	-2.18	+/-6.58	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.931	+/-1.67	4.36	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta	U	3.11	+/-2.31	3.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.33	+/-120	210	300	pCi/L	MYM1	11/02/14	1427	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 7, 2014

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 10:25		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.91	+/-19.9	32.0		pCi/L		MJH1	10/24/14	0649 1428419	1
Americium-241	U	-24.6	+/-29.1	41.9		pCi/L					
Antimony-124	UI	0.00	+/-7.77	14.1		pCi/L					
Antimony-125	U	3.75	+/-10.8	20.1		pCi/L					
Barium-133	U	0.281	+/-6.44	9.73		pCi/L					
Barium-140	U	0.334	+/-12.5	24.0		pCi/L					
Beryllium-7	U	26.3	+/-38.4	73.5		pCi/L					
Bismuth-212	U	-19.9	+/-66.1	98.7		pCi/L					
Bismuth-214		20.5	+/-14.8	13.5		pCi/L					
Cerium-139	U	-3.28	+/-3.63	6.15		pCi/L					
Cerium-141	U	-0.457	+/-9.21	14.4		pCi/L					
Cerium-144	U	-2.21	+/-24.0	42.9		pCi/L					
Cesium-134	U	-2.59	+/-4.73	7.69		pCi/L					
Cesium-136	U	3.35	+/-11.0	21.5		pCi/L					
Cesium-137	U	-1.66	+/-4.35	7.54	10.0	pCi/L					
Chromium-51	U	-30.2	+/-46.4	77.0		pCi/L					
Cobalt-56	U	3.54	+/-4.65	9.26		pCi/L					
Cobalt-57	U	2.04	+/-3.15	5.84		pCi/L					
Cobalt-58	U	-0.0672	+/-4.54	8.48		pCi/L					
Cobalt-60	U	-5.51	+/-4.44	6.61		pCi/L					
Europium-152	U	-0.272	+/-10.9	18.9		pCi/L					
Europium-154	U	-6.05	+/-13.3	19.0		pCi/L					
Europium-155	U	-3.5	+/-13.4	22.4		pCi/L					
Iridium-192	U	-0.89	+/-4.38	7.51		pCi/L					
Iron-59	U	-1.54	+/-9.24	16.9		pCi/L					
Lead-210	U	279	+/-956	1700		pCi/L					
Lead-212	U	-0.861	+/-9.85	16.2		pCi/L					
Lead-214		22.6	+/-15.3	15.4		pCi/L					
Manganese-54	U	-3.18	+/-4.39	7.61		pCi/L					
Mercury-203	U	-0.126	+/-4.62	8.06		pCi/L					
Neodymium-147	U	-54.7	+/-65.8	111		pCi/L					
Neptunium-239	U	-9.82	+/-32.4	57.6		pCi/L					
Niobium-94	U	-2.12	+/-3.97	6.72		pCi/L					
Niobium-95	U	-1.46	+/-5.46	9.24		pCi/L					
Potassium-40	U	14.4	+/-58.1	104		pCi/L					
Promethium-144	U	4.13	+/-4.11	8.02		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.17	+/-4.79	9.05	pCi/L
Radium-228	U	-2.91	+/-19.9	32.0	pCi/L
Ruthenium-106	U	24.8	+/-39.4	67.2	pCi/L
Silver-110m	U	0.930	+/-3.88	7.17	pCi/L
Sodium-22	U	-2.2	+/-4.67	6.68	pCi/L
Thallium-208	U	3.15	+/-7.32	7.14	pCi/L
Thorium-230	U	-1280	+/-1950	2840	pCi/L
Thorium-234	U	163	+/-346	432	pCi/L
Tin-113	U	-3.01	+/-5.37	8.49	pCi/L
Uranium-235	U	7.98	+/-40.0	47.2	pCi/L
Uranium-238	U	163	+/-346	432	pCi/L
Yttrium-88	U	-0.634	+/-5.18	9.60	pCi/L
Zinc-65	U	-3.77	+/-9.35	13.8	pCi/L
Zirconium-95	U	2.64	+/-8.33	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		3.95	+/-2.93	3.77	5.00	pCi/L	JXH3	11/03/14	1654	1430825	2
Beta		74.7	+/-7.38	4.31	5.00	pCi/L					
Alpha	U	3.53	+/-3.67	4.66	5.00	pCi/L	JXH3	11/05/14	0844	1430825	3
Beta		63.7	+/-6.68	3.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	104	+/-121	203	300	pCi/L	MYM1	11/02/14	1444	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48  
Sample ID: 358770028  
Matrix: Water  
Collect Date: 06-OCT-14 11:05  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.51	+/-18.2	29.8		pCi/L		MJH1	10/24/14	0649 1428419	1
Americium-241	U	-49.9	+/-38.0	60.1		pCi/L					
Antimony-124	U	-2.59	+/-11.3	20.7		pCi/L					
Antimony-125	U	3.05	+/-10.0	18.3		pCi/L					
Barium-133	U	6.49	+/-5.55	9.46		pCi/L					
Barium-140	U	-2.3	+/-10.8	20.1		pCi/L					
Beryllium-7	U	20.8	+/-36.9	69.0		pCi/L					
Bismuth-212	U	11.0	+/-56.3	102		pCi/L					
Bismuth-214	UI	0.00	+/-16.7	14.8		pCi/L					
Cerium-139	U	1.93	+/-3.49	6.36		pCi/L					
Cerium-141	U	-1.53	+/-9.96	14.9		pCi/L					
Cerium-144	U	-17.7	+/-27.5	40.6		pCi/L					
Cesium-134	U	1.89	+/-4.28	8.03		pCi/L					
Cesium-136	U	1.39	+/-12.4	23.7		pCi/L					
Cesium-137	U	-0.578	+/-4.27	7.50	10.0	pCi/L					
Chromium-51	U	-7.69	+/-46.1	80.8		pCi/L					
Cobalt-56	U	0.555	+/-4.20	7.97		pCi/L					
Cobalt-57	U	2.82	+/-3.29	6.08		pCi/L					
Cobalt-58	U	-1.44	+/-4.62	7.97		pCi/L					
Cobalt-60	U	-1.52	+/-4.22	7.60		pCi/L					
Europium-152	U	-1.17	+/-12.0	20.6		pCi/L					
Europium-154	U	-2.1	+/-12.3	22.6		pCi/L					
Europium-155	U	1.86	+/-14.2	25.5		pCi/L					
Iridium-192	U	-0.709	+/-4.34	7.61		pCi/L					
Iron-59	U	1.98	+/-9.01	17.4		pCi/L					
Lead-210	U	-544	+/-1520	2030		pCi/L					
Lead-212	U	0.230	+/-9.69	14.0		pCi/L					
Lead-214		22.2	+/-12.0	16.1		pCi/L					
Manganese-54	U	1.12	+/-4.45	7.42		pCi/L					
Mercury-203	U	-3.05	+/-5.29	7.72		pCi/L					
Neodymium-147	U	-20.1	+/-74.4	130		pCi/L					
Neptunium-239	U	-27.5	+/-34.0	58.3		pCi/L					
Niobium-94	U	0.128	+/-4.00	7.11		pCi/L					
Niobium-95	U	3.66	+/-6.49	6.67		pCi/L					
Potassium-40	U	-24.2	+/-57.7	100		pCi/L					
Promethium-144	U	5.76	+/-4.35	8.49		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 358770028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.08	+/-4.94	8.21	pCi/L
Radium-228	U	-5.51	+/-18.2	29.8	pCi/L
Ruthenium-106	U	38.4	+/-42.0	71.9	pCi/L
Silver-110m	U	2.61	+/-3.95	7.47	pCi/L
Sodium-22	U	-0.25	+/-4.25	7.94	pCi/L
Thallium-208	UI	0.00	+/-6.74	6.89	pCi/L
Thorium-230	U	372	+/-2190	3830	pCi/L
Thorium-234	U	-316	+/-387	514	pCi/L
Tin-113	U	0.0733	+/-5.50	9.75	pCi/L
Uranium-235	U	4.11	+/-31.9	45.7	pCi/L
Uranium-238	U	-316	+/-387	514	pCi/L
Yttrium-88	U	1.15	+/-3.73	7.91	pCi/L
Zinc-65	U	0.764	+/-8.52	16.1	pCi/L
Zirconium-95	U	2.43	+/-7.57	14.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.326	+/-1.95	4.47	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta		8.45	+/-3.08	3.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	45.5	+/-122	210	300	pCi/L	MYM1	11/02/14	1501	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358770029  
Matrix: Water  
Collect Date: 08-OCT-14 09:42  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.14	+/-16.5	26.4		pCi/L		MJH1	10/24/14	0650 1428419	1
Americium-241	U	-2.05	+/-11.2	17.5		pCi/L					
Antimony-124	U	7.46	+/-7.52	16.6		pCi/L					
Antimony-125	U	-0.071	+/-8.90	15.6		pCi/L					
Barium-133	U	1.67	+/-4.46	7.15		pCi/L					
Barium-140	U	1.92	+/-8.17	15.9		pCi/L					
Beryllium-7	U	9.72	+/-47.2	53.8		pCi/L					
Bismuth-212	U	3.09	+/-47.6	86.5		pCi/L					
Bismuth-214		34.5	+/-14.3	11.6		pCi/L					
Cerium-139	U	-0.375	+/-3.38	5.04		pCi/L					
Cerium-141	U	-2.37	+/-6.12	10.2		pCi/L					
Cerium-144	U	-7.47	+/-18.8	31.5		pCi/L					
Cesium-134	U	-1.46	+/-3.74	6.52		pCi/L					
Cesium-136	U	-0.874	+/-8.34	15.0		pCi/L					
Cesium-137	U	-1.6	+/-3.23	5.66	10.0	pCi/L					
Chromium-51	U	-5.68	+/-33.8	59.5		pCi/L					
Cobalt-56	U	1.76	+/-3.71	6.98		pCi/L					
Cobalt-57	U	-0.596	+/-2.35	3.98		pCi/L					
Cobalt-58	U	-1.26	+/-3.94	5.92		pCi/L					
Cobalt-60	U	0.244	+/-3.35	6.34		pCi/L					
Europium-152	U	-1.28	+/-9.35	15.8		pCi/L					
Europium-154	U	-9.45	+/-8.18	13.0		pCi/L					
Europium-155	U	5.50	+/-9.11	16.2		pCi/L					
Iridium-192	U	2.32	+/-3.40	6.26		pCi/L					
Iron-59	U	-0.661	+/-8.41	13.5		pCi/L					
Lead-210	U	115	+/-331	298		pCi/L					
Lead-212	U	3.47	+/-7.13	10.3		pCi/L					
Lead-214		28.9	+/-14.5	12.0		pCi/L					
Manganese-54	U	2.56	+/-6.91	5.67		pCi/L					
Mercury-203	U	3.00	+/-3.52	6.57		pCi/L					
Neodymium-147	U	-64	+/-56.5	88.4		pCi/L					
Neptunium-239	U	4.42	+/-24.1	41.9		pCi/L					
Niobium-94	U	-1.72	+/-3.02	5.22		pCi/L					
Niobium-95	U	1.16	+/-3.87	7.15		pCi/L					
Potassium-40	U	50.6	+/-78.7	62.5		pCi/L					
Promethium-144	U	2.25	+/-3.25	6.19		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358770029

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.51	+/-4.07	7.31	pCi/L
Radium-228	U	3.14	+/-16.5	26.4	pCi/L
Ruthenium-106	U	-20.4	+/-28.6	49.3	pCi/L
Silver-110m	U	1.75	+/-2.97	5.71	pCi/L
Sodium-22	U	-3.34	+/-2.89	4.58	pCi/L
Thallium-208	U	-3.26	+/-4.45	6.38	pCi/L
Thorium-230	U	344	+/-908	1460	pCi/L
Thorium-234	U	49.7	+/-162	203	pCi/L
Tin-113	U	-1.36	+/-4.26	7.34	pCi/L
Uranium-235	U	-18.8	+/-22.6	33.7	pCi/L
Uranium-238	U	49.7	+/-162	203	pCi/L
Yttrium-88	U	0.00	+/-3.40	6.72	pCi/L
Zinc-65	U	4.09	+/-11.5	13.1	pCi/L
Zirconium-95	U	-2.97	+/-7.60	11.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.344	+/-2.35	4.69	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta	U	0.461	+/-2.25	4.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.7	+/-120	210	300	pCi/L	MYM1	11/02/14	1517	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.1	+/-16.7	27.0		pCi/L		MJH1	10/24/14	0650 1428419	1
Americium-241	U	4.73	+/-13.0	23.5		pCi/L					
Antimony-124	U	2.49	+/-8.12	16.7		pCi/L					
Antimony-125	U	6.16	+/-8.17	15.5		pCi/L					
Barium-133	U	-0.343	+/-4.23	6.62		pCi/L					
Barium-140	U	7.52	+/-8.56	18.7		pCi/L					
Beryllium-7	U	-10.6	+/-30.0	51.8		pCi/L					
Bismuth-212	U	-7.05	+/-43.0	68.9		pCi/L					
Bismuth-214		29.4	+/-13.8	11.1		pCi/L					
Cerium-139	U	0.885	+/-2.78	4.84		pCi/L					
Cerium-141	U	-1.06	+/-5.97	10.1		pCi/L					
Cerium-144	U	13.4	+/-19.1	32.8		pCi/L					
Cesium-134	U	-0.0352	+/-3.47	6.45		pCi/L					
Cesium-136	U	8.92	+/-10.3	17.6		pCi/L					
Cesium-137	U	-2.12	+/-3.98	6.58	10.0	pCi/L					
Chromium-51	U	29.7	+/-34.9	66.3		pCi/L					
Cobalt-56	U	1.68	+/-3.28	6.44		pCi/L					
Cobalt-57	U	-3.05	+/-2.63	3.78		pCi/L					
Cobalt-58	U	1.35	+/-3.21	6.26		pCi/L					
Cobalt-60	U	0.820	+/-3.42	5.84		pCi/L					
Europium-152	U	-2.99	+/-8.67	15.2		pCi/L					
Europium-154	U	-3.44	+/-8.93	15.7		pCi/L					
Europium-155	U	0.400	+/-9.83	17.1		pCi/L					
Iridium-192	U	-2.34	+/-3.27	5.61		pCi/L					
Iron-59	U	3.90	+/-6.59	13.3		pCi/L					
Lead-210	U	-251	+/-322	476		pCi/L					
Lead-212	U	5.82	+/-9.67	8.78		pCi/L					
Lead-214		19.7	+/-12.9	17.2		pCi/L					
Manganese-54	U	2.85	+/-3.08	6.49		pCi/L					
Mercury-203	U	3.39	+/-3.48	6.64		pCi/L					
Neodymium-147	U	6.07	+/-59.0	106		pCi/L					
Neptunium-239	U	12.8	+/-23.6	42.1		pCi/L					
Niobium-94	U	-0.626	+/-3.06	5.58		pCi/L					
Niobium-95	U	-0.672	+/-4.53	6.80		pCi/L					
Potassium-40	U	41.8	+/-38.2	51.2		pCi/L					
Promethium-144	U	-1.57	+/-2.77	4.90		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.554	+/-3.80	6.72	pCi/L
Radium-228	U	-4.1	+/-16.7	27.0	pCi/L
Ruthenium-106	U	8.24	+/-31.0	55.9	pCi/L
Silver-110m	U	0.683	+/-3.26	5.86	pCi/L
Sodium-22	U	-1.21	+/-3.15	5.54	pCi/L
Thallium-208		7.87	+/-6.13	5.21	pCi/L
Thorium-230	U	-516	+/-912	1560	pCi/L
Thorium-234	U	-108	+/-147	221	pCi/L
Tin-113	U	3.29	+/-4.47	7.59	pCi/L
Uranium-235	U	-9.26	+/-22.8	31.8	pCi/L
Uranium-238	U	-108	+/-147	221	pCi/L
Yttrium-88	U	-1.15	+/-3.87	7.14	pCi/L
Zinc-65	U	-0.241	+/-8.14	12.9	pCi/L
Zirconium-95	U	-0.216	+/-5.82	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		5.07	+/-3.84	4.96	5.00	pCi/L	JXH3	11/03/14	1653	1430825	2
Beta		97.8	+/-8.29	3.87	5.00	pCi/L					
Alpha	U	-0.774	+/-2.27	4.98	5.00	pCi/L	JXH3	11/05/14	0844	1430825	3
Beta		101	+/-6.71	3.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	102	+/-124	209	300	pCi/L	MYM1	11/02/14	1534	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Dupl  
Sample ID: 358770031  
Matrix: Water  
Collect Date: 07-OCT-14 08:47  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	5.92	+/-18.7	32.6		pCi/L		MJH1	10/24/14	0650	1428419	1
Americium-241	U	3.49	+/-33.9	50.5		pCi/L						
Antimony-124	U	2.66	+/-8.92	18.6		pCi/L						
Antimony-125	U	1.19	+/-9.81	17.7		pCi/L						
Barium-133	U	4.28	+/-4.91	8.47		pCi/L						
Barium-140	U	5.56	+/-10.8	22.4		pCi/L						
Beryllium-7	U	2.06	+/-35.5	63.4		pCi/L						
Bismuth-212	U	29.6	+/-53.7	104		pCi/L						
Bismuth-214		22.1	+/-14.6	15.0		pCi/L						
Cerium-139	U	0.375	+/-3.61	6.21		pCi/L						
Cerium-141	U	3.22	+/-7.59	13.4		pCi/L						
Cerium-144	U	-2.17	+/-23.4	40.3		pCi/L						
Cesium-134	U	-0.244	+/-6.91	7.29		pCi/L						
Cesium-136	U	0.279	+/-11.4	21.9		pCi/L						
Cesium-137	U	-1.17	+/-3.43	6.18	10.0	pCi/L						
Chromium-51	U	-6.79	+/-41.6	74.0		pCi/L						
Cobalt-56	U	-2.05	+/-4.55	7.89		pCi/L						
Cobalt-57	U	0.0792	+/-3.04	5.30		pCi/L						
Cobalt-58	U	-0.172	+/-4.94	7.82		pCi/L						
Cobalt-60	U	3.48	+/-3.84	8.33		pCi/L						
Europium-152	U	8.92	+/-11.3	21.2		pCi/L						
Europium-154	U	-6.33	+/-11.8	20.8		pCi/L						
Europium-155	U	9.87	+/-12.0	22.1		pCi/L						
Iridium-192	U	-0.973	+/-3.87	6.84		pCi/L						
Iron-59	U	-4.33	+/-8.56	15.3		pCi/L						
Lead-210	U	456	+/-1020	1900		pCi/L						
Lead-212	U	1.97	+/-11.7	14.2		pCi/L						
Lead-214	UI	0.00	+/-17.2	19.8		pCi/L						
Manganese-54	U	2.77	+/-3.65	7.30		pCi/L						
Mercury-203	U	0.378	+/-4.93	8.17		pCi/L						
Neodymium-147	U	-79.8	+/-74.1	116		pCi/L						
Neptunium-239	U	-13.2	+/-31.8	54.2		pCi/L						
Niobium-94	U	3.19	+/-4.16	8.02		pCi/L						
Niobium-95	U	0.431	+/-4.31	8.00		pCi/L						
Potassium-40	U	17.7	+/-79.8	91.8		pCi/L						
Promethium-144	U	-2.23	+/-3.47	5.99		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Dupl  
Sample ID: 358770031

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.560	+/-4.45	8.03	pCi/L
Radium-228	U	5.92	+/-18.7	32.6	pCi/L
Ruthenium-106	U	-36.7	+/-31.7	52.0	pCi/L
Silver-110m	U	0.563	+/-3.19	6.09	pCi/L
Sodium-22	U	-3.85	+/-4.41	7.35	pCi/L
Thallium-208	U	5.40	+/-5.17	5.73	pCi/L
Thorium-230	U	2560	+/-1980	2830	pCi/L
Thorium-234	U	77.0	+/-321	435	pCi/L
Tin-113	U	0.0294	+/-5.13	9.13	pCi/L
Uranium-235	U	20.2	+/-23.3	42.0	pCi/L
Uranium-238	U	77.0	+/-321	435	pCi/L
Yttrium-88	U	3.62	+/-3.96	9.34	pCi/L
Zinc-65	U	-7.45	+/-9.04	15.4	pCi/L
Zirconium-95	U	2.58	+/-7.58	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.552	+/-2.44	4.90	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta	U	0.751	+/-2.43	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.16	+/-116	203	300	pCi/L	MYM1	11/02/14	1550	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## QC Summary

Report Date: November 7, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 358770

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428415										
QC1203190145 358770001 DUP											
Actinium-228	U	0.786	U	29.1	pCi/L	N/A		N/A	MJH1	10/23/14	11:43
	Uncertainty	+/-16.6		+/-25.1							
Americium-241	U	0.0578	U	5.34	pCi/L	N/A		N/A			
	Uncertainty	+/-29.3		+/-35.4							
Antimony-124	U	-5.09	U	0.365	pCi/L	N/A		N/A			
	Uncertainty	+/-8.60		+/-12.6							
Antimony-125	U	-4.15	U	-12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-9.16		+/-12.2							
Barium-133	U	-1.68	U	5.27	pCi/L	N/A		N/A			
	Uncertainty	+/-5.07		+/-4.25							
Barium-140	U	-4.03	U	0.814	pCi/L	N/A		N/A			
	Uncertainty	+/-9.11		+/-11.1							
Beryllium-7	U	12.1	U	42.0	pCi/L	N/A		N/A			
	Uncertainty	+/-30.4		+/-43.9							
Bismuth-212	U	-22.7	U	40.1	pCi/L	N/A		N/A			
	Uncertainty	+/-53.6		+/-59.2							
Bismuth-214		32.2	U	10.2	pCi/L	43.7		(0% - 100%)			
	Uncertainty	+/-14.4		+/-13.7							
Cerium-139	U	-2.46	U	-0.946	pCi/L	N/A		N/A			
	Uncertainty	+/-3.49		+/-3.83							
Cerium-141	U	-2.23	U	6.10	pCi/L	N/A		N/A			
	Uncertainty	+/-6.83		+/-8.29							
Cerium-144	U	-5.83	U	1.73	pCi/L	N/A		N/A			
	Uncertainty	+/-23.7		+/-25.7							
Cesium-134	U	2.94	U	2.51	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-4.62							
Cesium-136	U	-0.886	U	-4.99	pCi/L	N/A		N/A			
	Uncertainty	+/-9.29		+/-11.8							
Cesium-137	U	0.311	U	0.0322	pCi/L	N/A		N/A			
	Uncertainty	+/-3.65		+/-4.13							
Chromium-51	U	6.64	U	13.8	pCi/L	N/A		N/A			
	Uncertainty	+/-37.8		+/-48.3							
Cobalt-56	U	-0.664	U	0.471	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-5.37							
Cobalt-57	U	-0.383	U	1.08	pCi/L	N/A		N/A			
	Uncertainty	+/-2.78		+/-3.51							
Cobalt-58	U	1.55	U	-3.0	pCi/L	N/A		N/A			
	Uncertainty	+/-3.36		+/-4.31							
Cobalt-60	U	-3.21	U	3.00	pCi/L	N/A		N/A			
	Uncertainty	+/-4.72		+/-4.09							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Europium-152	U	-2.01	U	3.32	pCi/L	N/A			N/A MJH1	10/23/14	11:43
	Uncertainty	+/-10.1		+/-12.7							
Europium-154	U	3.37	U	-6.8	pCi/L	N/A			N/A		
	Uncertainty	+/-10.7		+/-14.8							
Europium-155	U	4.23	U	9.79	pCi/L	N/A			N/A		
	Uncertainty	+/-11.4		+/-14.3							
Iridium-192	U	-1.99	U	-1.32	pCi/L	N/A			N/A		
	Uncertainty	+/-3.37		+/-4.33							
Iron-59	U	0.244	U	8.07	pCi/L	N/A			N/A		
	Uncertainty	+/-8.99		+/-8.61							
Lead-210	U	-271	U	310	pCi/L	N/A			N/A		
	Uncertainty	+/-1290		+/-1290							
Lead-212		13.4	U	9.49	pCi/L	13.6		(0% - 100%)			
	Uncertainty	+/-9.89		+/-11.4							
Lead-214		19.4	U	3.66	pCi/L	2.85		(0% - 100%)			
	Uncertainty	+/-12.9		+/-12.7							
Manganese-54	U	-0.649	U	-2.6	pCi/L	N/A			N/A		
	Uncertainty	+/-2.93		+/-4.48							
Mercury-203	U	1.75	U	-2.42	pCi/L	N/A			N/A		
	Uncertainty	+/-3.64		+/-5.19							
Neodymium-147	U	29.8	U	-16.3	pCi/L	N/A			N/A		
	Uncertainty	+/-51.4		+/-83.1							
Neptunium-239	U	19.4	U	2.98	pCi/L	N/A			N/A		
	Uncertainty	+/-31.5		+/-37.7							
Niobium-94	U	5.44	U	0.867	pCi/L	N/A			N/A		
	Uncertainty	+/-3.32		+/-4.38							
Niobium-95	U	1.62	U	4.45	pCi/L	N/A			N/A		
	Uncertainty	+/-3.47		+/-4.59							
Potassium-40	U	41.8	U	68.8	pCi/L	N/A			N/A		
	Uncertainty	+/-75.7		+/-66.4							
Promethium-144	U	2.98	U	0.925	pCi/L	N/A			N/A		
	Uncertainty	+/-3.21		+/-4.23							
Promethium-146	U	1.04	U	4.58	pCi/L	N/A			N/A		
	Uncertainty	+/-4.10		+/-5.35							
Radium-228	U	0.786	U	29.1	pCi/L	N/A			N/A		
	Uncertainty	+/-16.6		+/-25.1							
Ruthenium-106	U	-0.394	U	8.59	pCi/L	N/A			N/A		
	Uncertainty	+/-30.9		+/-35.4							
Silver-110m	U	-2.15	U	-1.08	pCi/L	N/A			N/A		
	Uncertainty	+/-3.41		+/-4.01							
Sodium-22	U	1.19	U	-3.2	pCi/L	N/A			N/A		
	Uncertainty	+/-3.78		+/-5.41							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Thallium-208	U	-2.35	U	-0.234	pCi/L	N/A		N/A			
	Uncertainty	+/-4.55		+/-5.15							
Thorium-230	U	404	U	2130	pCi/L	N/A		N/A	MJH1	10/23/14	11:43
	Uncertainty	+/-1760		+/-2600							
Thorium-234	U	86.6	U	-123	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-341							
Tin-113	U	7.60	U	1.32	pCi/L	N/A		N/A			
	Uncertainty	+/-6.03		+/-6.17							
Uranium-235	U	-4.02	U	14.2	pCi/L	N/A		N/A			
	Uncertainty	+/-27.5		+/-28.3							
Uranium-238	U	86.6	U	-123	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-341							
Yttrium-88	U	0.303	U	-4.9	pCi/L	N/A		N/A			
	Uncertainty	+/-4.16		+/-5.31							
Zinc-65	U	0.765	U	6.89	pCi/L	N/A		N/A			
	Uncertainty	+/-6.97		+/-5.59							
Zirconium-95	U	-0.959	U	-0.507	pCi/L	N/A		N/A			
	Uncertainty	+/-6.35		+/-7.98							
QC1203190146	LCS										
Actinium-228			U	-58.2	pCi/L					10/23/14	11:34
	Uncertainty			+/-1050							
Americium-241	1.10E+05			1.16E+05	pCi/L		105	(75%-125%)			
	Uncertainty			+/-3260							
Antimony-124			U	190	pCi/L						
	Uncertainty			+/-209							
Antimony-125			U	94.2	pCi/L						
	Uncertainty			+/-581							
Barium-133			U	-183	pCi/L						
	Uncertainty			+/-237							
Barium-140			U	31.1	pCi/L						
	Uncertainty			+/-132							
Beryllium-7			U	-1460	pCi/L						
	Uncertainty			+/-1800							
Bismuth-212			U	-2020	pCi/L						
	Uncertainty			+/-2740							
Bismuth-214			U	-118	pCi/L						
	Uncertainty			+/-355							
Cerium-139				598	pCi/L						
	Uncertainty			+/-210							
Cerium-141			U	-131	pCi/L						
	Uncertainty			+/-235							
Cerium-144			U	11.1	pCi/L						
	Uncertainty			+/-1080							
Cesium-134			U	61.6	pCi/L						
	Uncertainty										

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Cesium-136			U	+/-238 137	pCi/L				MJH1	10/23/14	11:34
	Uncertainty			+/-453							
Cesium-137	44700			44900	pCi/L		101	(75%-125%)			
	Uncertainty			+/-859							
Chromium-51			U	193	pCi/L						
	Uncertainty			+/-1610							
Cobalt-56			U	-80.8	pCi/L						
	Uncertainty			+/-294							
Cobalt-57				3470	pCi/L						
	Uncertainty			+/-257							
Cobalt-58			U	-124	pCi/L						
	Uncertainty			+/-228							
Cobalt-60	54000			54800	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1100							
Europium-152			U	-379	pCi/L						
	Uncertainty			+/-532							
Europium-154			U	199	pCi/L						
	Uncertainty			+/-361							
Europium-155			U	293	pCi/L						
	Uncertainty			+/-550							
Iridium-192			U	46.2	pCi/L						
	Uncertainty			+/-176							
Iron-59			U	-199	pCi/L						
	Uncertainty			+/-538							
Lead-210				1.21E+06	pCi/L						
	Uncertainty			+/-1.22E+05							
Lead-212			U	107	pCi/L						
	Uncertainty			+/-306							
Lead-214			U	208	pCi/L						
	Uncertainty			+/-408							
Manganese-54			U	60.1	pCi/L						
	Uncertainty			+/-232							
Mercury-203			U	121	pCi/L						
	Uncertainty			+/-209							
Neodymium-147			U	44.0	pCi/L						
	Uncertainty			+/-1660							
Neptunium-239			U	754	pCi/L						
	Uncertainty			+/-1580							
Niobium-94			U	-45.8	pCi/L						
	Uncertainty			+/-196							
Niobium-95			U	1.36	pCi/L						
	Uncertainty			+/-208							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Potassium-40			U	-501	pCi/L						
	Uncertainty			+/-872							
Promethium-144			U	-91	pCi/L				MJH1	10/23/14	11:34
	Uncertainty			+/-204							
Promethium-146			U	59.6	pCi/L						
	Uncertainty			+/-274							
Radium-228			U	-58.2	pCi/L						
	Uncertainty			+/-1050							
Ruthenium-106			U	-437	pCi/L						
	Uncertainty			+/-1730							
Silver-110m			U	347	pCi/L						
	Uncertainty			+/-238							
Sodium-22			U	68.9	pCi/L						
	Uncertainty			+/-127							
Thallium-208			U	-143	pCi/L						
	Uncertainty			+/-180							
Thorium-230			U	46800	pCi/L						
	Uncertainty			+/-91600							
Thorium-234			U	-18000	pCi/L						
	Uncertainty			+/-12800							
Tin-113			U	336	pCi/L						
	Uncertainty			+/-379							
Uranium-235			U	-714	pCi/L						
	Uncertainty			+/-922							
Uranium-238			U	-18000	pCi/L						
	Uncertainty			+/-12800							
Yttrium-88				398	pCi/L						
	Uncertainty			+/-150							
Zinc-65				11100	pCi/L						
	Uncertainty			+/-1130							
Zirconium-95			U	-53.1	pCi/L						
	Uncertainty			+/-372							
QC1203190144	MB										
Actinium-228			U	-4.55	pCi/L					10/23/14	11:27
	Uncertainty			+/-20.2							
Americium-241			U	-23.8	pCi/L						
	Uncertainty			+/-29.3							
Antimony-124			U	0.0429	pCi/L						
	Uncertainty			+/-13.2							
Antimony-125			U	-5.42	pCi/L						
	Uncertainty			+/-12.3							
Barium-133			U	-0.708	pCi/L						
	Uncertainty			+/-6.09							
Barium-140			U	4.06	pCi/L						
	Uncertainty										



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Beryllium-7			U	+/-7.70 -21.6	pCi/L				MJH1	10/23/14	11:27
	Uncertainty			+/-37.5							
Bismuth-212			U	-13.7	pCi/L						
	Uncertainty			+/-75.5							
Bismuth-214			U	-3.84	pCi/L						
	Uncertainty			+/-11.1							
Cerium-139			U	-0.779	pCi/L						
	Uncertainty			+/-3.34							
Cerium-141			U	1.87	pCi/L						
	Uncertainty			+/-6.50							
Cerium-144			U	-7.61	pCi/L						
	Uncertainty			+/-21.4							
Cesium-134			U	7.61	pCi/L						
	Uncertainty			+/-4.41							
Cesium-136			U	-1.11	pCi/L						
	Uncertainty			+/-9.09							
Cesium-137			U	4.19	pCi/L						
	Uncertainty			+/-4.64							
Chromium-51			U	34.2	pCi/L						
	Uncertainty			+/-49.2							
Cobalt-56			U	0.747	pCi/L						
	Uncertainty			+/-5.19							
Cobalt-57			U	0.154	pCi/L						
	Uncertainty			+/-2.57							
Cobalt-58			U	-0.769	pCi/L						
	Uncertainty			+/-4.58							
Cobalt-60			U	-2.71	pCi/L						
	Uncertainty			+/-5.38							
Europium-152			U	6.32	pCi/L						
	Uncertainty			+/-13.0							
Europium-154			U	-0.0545	pCi/L						
	Uncertainty			+/-14.3							
Europium-155			U	-17.5	pCi/L						
	Uncertainty			+/-14.1							
Iridium-192			U	2.10	pCi/L						
	Uncertainty			+/-5.54							
Iron-59			U	1.39	pCi/L						
	Uncertainty			+/-8.62							
Lead-210			U	1170	pCi/L						
	Uncertainty			+/-1540							
Lead-212			U	-0.533	pCi/L						
	Uncertainty			+/-8.94							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Lead-214			U	1.50	pCi/L						
	Uncertainty			+/-17.2							
Manganese-54			U	1.61	pCi/L				MJH1	10/23/14	11:27
	Uncertainty			+/-4.70							
Mercury-203			U	-1.47	pCi/L						
	Uncertainty			+/-4.11							
Neodymium-147			U	-5.06	pCi/L						
	Uncertainty			+/-33.9							
Neptunium-239			U	4.32	pCi/L						
	Uncertainty			+/-34.0							
Niobium-94			U	2.38	pCi/L						
	Uncertainty			+/-4.75							
Niobium-95			U	-1.5	pCi/L						
	Uncertainty			+/-4.16							
Potassium-40			U	-44.7	pCi/L						
	Uncertainty			+/-69.3							
Promethium-144			U	-1.67	pCi/L						
	Uncertainty			+/-4.84							
Promethium-146			U	-4.15	pCi/L						
	Uncertainty			+/-6.17							
Radium-228			U	-4.55	pCi/L						
	Uncertainty			+/-20.2							
Ruthenium-106			U	66.4	pCi/L						
	Uncertainty			+/-36.4							
Silver-110m			U	-2.78	pCi/L						
	Uncertainty			+/-4.04							
Sodium-22			U	-0.0901	pCi/L						
	Uncertainty			+/-5.00							
Thallium-208			U	2.67	pCi/L						
	Uncertainty			+/-5.99							
Thorium-230			U	2.48	pCi/L						
	Uncertainty			+/-1650							
Thorium-234			U	-234	pCi/L						
	Uncertainty			+/-288							
Tin-113			U	-0.643	pCi/L						
	Uncertainty			+/-8.54							
Uranium-235			U	-2.89	pCi/L						
	Uncertainty			+/-25.9							
Uranium-238			U	-234	pCi/L						
	Uncertainty			+/-288							
Yttrium-88			U	1.09	pCi/L						
	Uncertainty			+/-5.71							
Zinc-65			U	0.961	pCi/L						
	Uncertainty			+/-10.2							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Zirconium-95			U	10.0	pCi/L						
	Uncertainty			+/-8.48							
Batch	1428419										
QC1203190151 358770021 DUP											
Actinium-228	U	-22.3	U	17.3	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-18.1		+/-19.7							
Americium-241	U	10.3	U	-51.1	pCi/L	N/A		N/A			
	Uncertainty	+/-24.2		+/-9.22							
Antimony-124	U	-9.23	U	5.91	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-12.4							
Antimony-125	U	9.77	U	8.57	pCi/L	N/A		N/A			
	Uncertainty	+/-18.8		+/-12.5							
Barium-133	U	0.0466	U	-7.29	pCi/L	N/A		N/A			
	Uncertainty	+/-5.99		+/-6.06							
Barium-140	U	3.76	U	1.63	pCi/L	N/A		N/A			
	Uncertainty	+/-11.4		+/-13.8							
Beryllium-7	U	34.6	U	19.3	pCi/L	N/A		N/A			
	Uncertainty	+/-45.5		+/-55.0							
Bismuth-212	U	-21.9	U	12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-60.4		+/-71.3							
Bismuth-214	UI	0.00	U	21.7	pCi/L	N/A		N/A			
	Uncertainty	+/-18.1		+/-15.4							
Cerium-139	U	-0.603	U	1.13	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-3.80							
Cerium-141	U	-6.68	U	10.0	pCi/L	N/A		N/A			
	Uncertainty	+/-9.56		+/-8.16							
Cerium-144	U	16.9	U	29.3	pCi/L	N/A		N/A			
	Uncertainty	+/-27.5		+/-23.4							
Cesium-134	U	4.74	U	-1.63	pCi/L	N/A		N/A			
	Uncertainty	+/-4.24		+/-5.34							
Cesium-136	U	-6.19	U	-8.52	pCi/L	N/A		N/A			
	Uncertainty	+/-13.1		+/-15.8							
Cesium-137	U	-1.31	U	0.874	pCi/L	N/A		N/A			
	Uncertainty	+/-4.38		+/-5.20							
Chromium-51	U	10.4	U	21.6	pCi/L	N/A		N/A			
	Uncertainty	+/-48.8		+/-55.2							
Cobalt-56	U	-0.521	U	0.0451	pCi/L	N/A		N/A			
	Uncertainty	+/-4.32		+/-6.55							
Cobalt-57	U	-1.67	U	-0.324	pCi/L	N/A		N/A			
	Uncertainty	+/-3.30		+/-2.86							
Cobalt-58	U	0.161	U	-3.32	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-5.24							
Cobalt-60	U	1.95	U	-8.91	pCi/L	N/A		N/A			
	Uncertainty	+/-4.91		+/-6.02							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Europium-152	U	-2.24	U	2.84	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-13.5							
Europium-154	U	2.49	U	-2.42	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-13.5		+/-21.1							
Europium-155	U	-1.67	U	-11.5	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-13.4							
Iridium-192	U	1.34	U	1.26	pCi/L	N/A		N/A			
	Uncertainty	+/-4.69		+/-5.00							
Iron-59	U	-2.02	U	10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-12.5							
Lead-210	U	695	U	-116	pCi/L	N/A		N/A			
	Uncertainty	+/-760		+/-99.1							
Lead-212	U	-1.1	U	4.46	pCi/L	N/A		N/A			
	Uncertainty	+/-9.43		+/-10.6							
Lead-214		21.0	U	-5.81	pCi/L	6.33		(0% - 100%)			
	Uncertainty	+/-16.2		+/-13.8							
Manganese-54	U	1.85	U	-0.42	pCi/L	N/A		N/A			
	Uncertainty	+/-4.59		+/-4.53							
Mercury-203	U	-3.63	U	-0.414	pCi/L	N/A		N/A			
	Uncertainty	+/-5.15		+/-5.94							
Neodymium-147	U	-40.4	U	-33.6	pCi/L	N/A		N/A			
	Uncertainty	+/-76.1		+/-105							
Neptunium-239	U	-7.87	U	-31.2	pCi/L	N/A		N/A			
	Uncertainty	+/-33.5		+/-29.4							
Niobium-94	U	-2.49	U	-2.96	pCi/L	N/A		N/A			
	Uncertainty	+/-3.92		+/-5.04							
Niobium-95	U	1.86	U	4.65	pCi/L	N/A		N/A			
	Uncertainty	+/-4.66		+/-8.58							
Potassium-40	U	-51.7	U	-50.1	pCi/L	N/A		N/A			
	Uncertainty	+/-73.7		+/-72.7							
Promethium-144	U	4.31	U	1.88	pCi/L	N/A		N/A			
	Uncertainty	+/-3.94		+/-6.82							
Promethium-146	U	-0.935	U	0.732	pCi/L	N/A		N/A			
	Uncertainty	+/-5.09		+/-5.44							
Radium-228	U	-22.3	U	17.3	pCi/L	N/A		N/A			
	Uncertainty	+/-18.1		+/-19.7							
Ruthenium-106	U	-12.8	U	-7.62	pCi/L	N/A		N/A			
	Uncertainty	+/-37.6		+/-48.0							
Silver-110m	U	-0.878	U	-0.985	pCi/L	N/A		N/A			
	Uncertainty	+/-4.02		+/-4.93							
Sodium-22	U	1.02	U	-0.699	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-7.47							
Thallium-208	U	-3.53	U	7.88	pCi/L	N/A		N/A			
	Uncertainty	+/-6.30		+/-6.89							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Thorium-230	U	791	U	482	pCi/L	N/A		N/A			
	Uncertainty	+/-1510		+/-616							
Thorium-234	U	14.8	U	-10.3	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-281		+/-112							
Tin-113	U	-0.447	U	-3.46	pCi/L	N/A		N/A			
	Uncertainty	+/-5.39		+/-6.28							
Uranium-235	U	-18.9	U	-21.9	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-28.1							
Uranium-238	U	14.8	U	-10.3	pCi/L	N/A		N/A			
	Uncertainty	+/-281		+/-112							
Yttrium-88	U	0.0457	U	0.762	pCi/L	N/A		N/A			
	Uncertainty	+/-5.21		+/-4.94							
Zinc-65	U	-9.23	U	-4.0	pCi/L	N/A		N/A			
	Uncertainty	+/-11.5		+/-13.0							
Zirconium-95	U	4.91	U	-14.4	pCi/L	N/A		N/A			
	Uncertainty	+/-7.97		+/-12.6							
QC1203190152	LCS										
Actinium-228			U	1050	pCi/L					10/24/14	07:06
	Uncertainty			+/-960							
Americium-241	1.10E+05			1.23E+05	pCi/L		112	(75%-125%)			
	Uncertainty			+/-3240							
Antimony-124			U	-83	pCi/L						
	Uncertainty			+/-182							
Antimony-125			U	201	pCi/L						
	Uncertainty			+/-497							
Barium-133			U	-389	pCi/L						
	Uncertainty			+/-210							
Barium-140			U	79.3	pCi/L						
	Uncertainty			+/-128							
Beryllium-7			U	989	pCi/L						
	Uncertainty			+/-1570							
Bismuth-212			U	-61.3	pCi/L						
	Uncertainty			+/-2500							
Bismuth-214			U	161	pCi/L						
	Uncertainty			+/-303							
Cerium-139				613	pCi/L						
	Uncertainty			+/-173							
Cerium-141			U	158	pCi/L						
	Uncertainty			+/-209							
Cerium-144			U	-195	pCi/L						
	Uncertainty			+/-912							
Cesium-134			U	-25.1	pCi/L						
	Uncertainty			+/-214							
Cesium-136			U	-6.7	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Cesium-137	44700			+/-406 46300	pCi/L		104	(75%-125%)	MJH1	10/24/14	07:06
	Uncertainty			+/-815							
Chromium-51			U	-247	pCi/L						
	Uncertainty			+/-1430							
Cobalt-56			U	100	pCi/L						
	Uncertainty			+/-224							
Cobalt-57				3660	pCi/L						
	Uncertainty			+/-240							
Cobalt-58			U	156	pCi/L						
	Uncertainty			+/-207							
Cobalt-60	54000			55800	pCi/L		103	(75%-125%)			
	Uncertainty			+/-978							
Europium-152			U	-523	pCi/L						
	Uncertainty			+/-474							
Europium-154			U	37.5	pCi/L						
	Uncertainty			+/-343							
Europium-155			U	132	pCi/L						
	Uncertainty			+/-510							
Iridium-192			U	118	pCi/L						
	Uncertainty			+/-167							
Iron-59			U	278	pCi/L						
	Uncertainty			+/-482							
Lead-210				1.41E+06	pCi/L						
	Uncertainty			+/-59700							
Lead-212			U	-23.2	pCi/L						
	Uncertainty			+/-302							
Lead-214			U	304	pCi/L						
	Uncertainty			+/-353							
Manganese-54			U	-55.7	pCi/L						
	Uncertainty			+/-204							
Mercury-203			U	51.7	pCi/L						
	Uncertainty			+/-161							
Neodymium-147			U	-161	pCi/L						
	Uncertainty			+/-1640							
Neptunium-239			U	-179	pCi/L						
	Uncertainty			+/-1460							
Niobium-94			U	172	pCi/L						
	Uncertainty			+/-127							
Niobium-95			U	-125	pCi/L						
	Uncertainty			+/-186							
Potassium-40			U	-62.6	pCi/L						
	Uncertainty			+/-814							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Promethium-144			U	-108	pCi/L						
	Uncertainty			+/-155							
Promethium-146			U	156	pCi/L				MJH1	10/24/14	07:06
	Uncertainty			+/-244							
Radium-228			U	1050	pCi/L						
	Uncertainty			+/-960							
Ruthenium-106			U	-114	pCi/L						
	Uncertainty			+/-1540							
Silver-110m				957	pCi/L						
	Uncertainty			+/-216							
Sodium-22			U	5.88	pCi/L						
	Uncertainty			+/-121							
Thallium-208			U	16.0	pCi/L						
	Uncertainty			+/-162							
Thorium-230			U	89300	pCi/L						
	Uncertainty			+/-67500							
Thorium-234			U	-9120	pCi/L						
	Uncertainty			+/-8850							
Tin-113				411	pCi/L						
	Uncertainty			+/-285							
Uranium-235			U	-27.5	pCi/L						
	Uncertainty			+/-812							
Uranium-238			U	-9120	pCi/L						
	Uncertainty			+/-8850							
Yttrium-88				516	pCi/L						
	Uncertainty			+/-201							
Zinc-65				11400	pCi/L						
	Uncertainty			+/-969							
Zirconium-95			U	57.6	pCi/L						
	Uncertainty			+/-340							
QC1203190150	MB										
Actinium-228			U	1.26	pCi/L					10/24/14	07:06
	Uncertainty			+/-15.2							
Americium-241			U	-5.51	pCi/L						
	Uncertainty			+/-13.2							
Antimony-124			U	0.0381	pCi/L						
	Uncertainty			+/-7.37							
Antimony-125			U	-1.87	pCi/L						
	Uncertainty			+/-8.91							
Barium-133			U	-6.34	pCi/L						
	Uncertainty			+/-5.08							
Barium-140			U	1.95	pCi/L						
	Uncertainty			+/-4.94							
Beryllium-7			U	-9.87	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428419										
				+/-25.3							
Bismuth-212			U	22.6	pCi/L				MJH1	10/24/14	07:06
	Uncertainty			+/-49.9							
Bismuth-214			U	-6.45	pCi/L						
	Uncertainty			+/-9.09							
Cerium-139			U	0.266	pCi/L						
	Uncertainty			+/-2.82							
Cerium-141			U	-1.38	pCi/L						
	Uncertainty			+/-6.26							
Cerium-144			U	15.3	pCi/L						
	Uncertainty			+/-18.8							
Cesium-134			U	1.51	pCi/L						
	Uncertainty			+/-3.85							
Cesium-136			U	-0.154	pCi/L						
	Uncertainty			+/-5.59							
Cesium-137			U	1.38	pCi/L						
	Uncertainty			+/-7.04							
Chromium-51			U	-7.06	pCi/L						
	Uncertainty			+/-27.3							
Cobalt-56			U	0.970	pCi/L						
	Uncertainty			+/-3.56							
Cobalt-57			U	-0.781	pCi/L						
	Uncertainty			+/-2.51							
Cobalt-58			U	-1.95	pCi/L						
	Uncertainty			+/-3.24							
Cobalt-60			U	-0.458	pCi/L						
	Uncertainty			+/-3.60							
Europium-152			U	-1.34	pCi/L						
	Uncertainty			+/-9.55							
Europium-154			U	7.83	pCi/L						
	Uncertainty			+/-10.3							
Europium-155			U	-7.47	pCi/L						
	Uncertainty			+/-9.78							
Iridium-192			U	-1.24	pCi/L						
	Uncertainty			+/-3.08							
Iron-59			U	0.466	pCi/L						
	Uncertainty			+/-6.96							
Lead-210			U	-268	pCi/L						
	Uncertainty			+/-384							
Lead-212			U	-1.64	pCi/L						
	Uncertainty			+/-6.68							
Lead-214			U	2.05	pCi/L						
	Uncertainty			+/-9.55							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428419										
Manganese-54			U	1.16	pCi/L						
	Uncertainty			+/-3.39							
Mercury-203			U	0.248	pCi/L				MJH1	10/24/14	07:06
	Uncertainty			+/-3.17							
Neodymium-147			U	6.92	pCi/L						
	Uncertainty			+/-30.9							
Neptunium-239			U	-7.34	pCi/L						
	Uncertainty			+/-26.7							
Niobium-94			U	-0.743	pCi/L						
	Uncertainty			+/-3.56							
Niobium-95			U	-3.84	pCi/L						
	Uncertainty			+/-4.23							
Potassium-40			U	-62.7	pCi/L						
	Uncertainty			+/-43.0							
Promethium-144			U	2.56	pCi/L						
	Uncertainty			+/-3.76							
Promethium-146			U	4.60	pCi/L						
	Uncertainty			+/-4.85							
Radium-228			U	1.26	pCi/L						
	Uncertainty			+/-15.2							
Ruthenium-106			U	-13.5	pCi/L						
	Uncertainty			+/-29.3							
Silver-110m			U	-1.85	pCi/L						
	Uncertainty			+/-3.81							
Sodium-22			U	2.59	pCi/L						
	Uncertainty			+/-3.58							
Thallium-208			UI	0.00	pCi/L						
	Uncertainty			+/-5.66							
Thorium-230			U	-1340	pCi/L						
	Uncertainty			+/-1120							
Thorium-234			U	-147	pCi/L						
	Uncertainty			+/-138							
Tin-113			U	0.143	pCi/L						
	Uncertainty			+/-4.01							
Uranium-235			U	2.02	pCi/L						
	Uncertainty			+/-20.8							
Uranium-238			U	-147	pCi/L						
	Uncertainty			+/-138							
Yttrium-88			U	-0.399	pCi/L						
	Uncertainty			+/-3.62							
Zinc-65			U	-3.83	pCi/L						
	Uncertainty			+/-7.93							
Zirconium-95			U	-1.62	pCi/L						
	Uncertainty			+/-6.59							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1430824										
QC1203196244	358770001	DUP									
Alpha	U	4.05	U	-1.29	pCi/L	N/A		N/A	JXH3	11/04/14	17:24
	Uncertainty	+/-3.50		+/-1.93							
Beta		15.5		15.9	pCi/L	2.75		(0% - 100%)			
	Uncertainty	+/-4.09		+/-3.68							
QC1203196247	LCS										
Alpha	122			140	pCi/L		115	(75%-125%)		11/04/14	17:27
	Uncertainty			+/-12.7							
Beta	478			546	pCi/L		114	(75%-125%)			
	Uncertainty			+/-18.8							
QC1203196243	MB										
Alpha			U	-0.72	pCi/L					11/04/14	17:23
	Uncertainty			+/-1.33							
Beta			U	-2.2	pCi/L						
	Uncertainty			+/-1.92							
QC1203196245	358770001	MS									
Alpha	608 U	4.05		723	pCi/L		119	(75%-125%)		11/07/14	09:03
	Uncertainty	+/-3.50		+/-69.4							
Beta	2390	15.5		2810	pCi/L		117	(75%-125%)			
	Uncertainty	+/-4.09		+/-97.2							
QC1203196246	358770001	MSD									
Alpha	608 U	4.05		749	pCi/L	3.51	123	(0%-20%)		11/04/14	17:25
	Uncertainty	+/-3.50		+/-66.4							
Beta	2390	15.5		2850	pCi/L	1.51	119	(0%-20%)			
	Uncertainty	+/-4.09		+/-96.0							
Batch	1430825										
QC1203196249	358770021	DUP									
Alpha	U	-0.325	U	-0.44	pCi/L	N/A		N/A	JXH3	11/03/14	16:50
	Uncertainty	+/-2.02		+/-2.01							
Beta		5.26	U	2.39	pCi/L	75.0		(0% - 100%)			
	Uncertainty	+/-2.71		+/-2.57							
QC1203196252	LCS										
Alpha	122			144	pCi/L		118	(75%-125%)		11/04/14	13:17
	Uncertainty			+/-13.4							
Beta	478			554	pCi/L		116	(75%-125%)			
	Uncertainty			+/-19.0							
QC1203196248	MB										
Alpha			U	-0.855	pCi/L					11/03/14	16:53
	Uncertainty			+/-1.83							
Beta			U	-1.21	pCi/L						
	Uncertainty			+/-2.27							
QC1203196250	358770021	MS									
Alpha	486 U	-0.325		606	pCi/L		125	(75%-125%)		11/03/14	16:51
	Uncertainty	+/-2.02		+/-58.3							
Beta	1910	5.26		2340	pCi/L		122	(75%-125%)			
	Uncertainty	+/-2.71		+/-79.9							
QC1203196251	358770021	MSD									

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1430825										
Alpha	486	U	-0.325	574	pCi/L	5.37	118	(0%-20%)		11/04/14	11:55
	Uncertainty		+/-2.02	+/-55.5							
Beta	1910		5.26	2220	pCi/L	5.53	116	(0%-20%)	JXH3		
	Uncertainty		+/-2.71	+/-75.1							
<b>Rad Liquid Scintillation</b>											
Batch	1429883										
QC1203193781	358770017	DUP									
Technetium-99		U	8.57	U	-3.88	pCi/L	N/A		N/AMYM1	11/02/14	16:24
		Uncertainty	+/-122		+/-119						
QC1203193782	LCS										
Technetium-99			4340		3720	pCi/L	85.5	(75%-125%)		11/02/14	16:40
			Uncertainty		+/-228						
QC1203193780	MB										
Technetium-99				U	-6.43	pCi/L				11/02/14	16:07
			Uncertainty		+/-120						
Batch	1434030										
QC1203204238	358770001	DUP									
Technetium-99		U	39.5	U	-36.1	pCi/L	N/A		N/A GXR1	11/07/14	07:05
		Uncertainty	+/-122		+/-118						
QC1203204239	LCS										
Technetium-99			4340		4560	pCi/L	105	(75%-125%)		11/07/14	07:22
			Uncertainty		+/-258						
QC1203204237	MB										
Technetium-99				U	2.27	pCi/L				11/07/14	06:48
			Uncertainty		+/-130						

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 358770

Page 17 of 17

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 07 November 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



February 17, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 365772

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 26, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C. 29061

365772

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/12/15 10:34	1000	X	X	X		X	REC
WELL	#3A	1/21/15 11:36	1000	X	X	X		X	REC
WELL	#7	1/19/15 13:56	1000	X	X	X		X	REC
WELL	#10	1/19/15 14:15	1000	X	X	X		X	REC
WELL	#13R	1/19/15 11:39	1000	X	X	X		X	REC
WELL	#14	1/20/15 14:27	1000	X	X	X		X	REC
WELL	#15	1/20/15 11:14	1000	X	X	X		X	REC
WELL	#16	1/20/15 11:33	1000	X	X	X		X	REC
WELL	#17	1/20/15 09:20	1000	X	X	X		X	REC
WELL	#18	1/19/15 10:38	1000	X	X	X		X	REC
WELL	#20	1/21/15 10:40	1000	X	X	X		X	REC
WELL	#22	1/19/15 10:16	1000	X	X	X		X	REC
WELL	#23R	1/20/15 14:03	1000	X	X	X		X	REC
WELL	#24	1/20/15 08:45	1000	X	X	X		X	REC
WELL	#26	1/12/15 10:12	1000	X	X	X		X	REC
WELL	#27	1/21/14 11:05	1000	X	X	X		X	REC
WELL	#28	1/19/15 11:14	1000	X	X	X		X	REC
WELL	#29	1/19/15 09:33	1000	X	X	X		X	REC
WELL	#30	1/19/15 09:53	1000	X	X	X		X	REC
WELL	#32	1/19/15 14:38	1000	X	X	X		X	REC
WELL	#33	1/20/15 10:26	1000	X	X	X		X	REC
WELL	#38	1/19/15 09:05	1000	X	X	X		X	REC
WELL	#39	1/20/15 09:44	1000	X	X	X		X	REC
WELL	#41R	1/12/15 10:52	1000	X	X	X		X	REC
WELL	#43	1/20/15 10:07	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/23/15

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## Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

Year: **2015**

365772

[illegible]

Rec'd: *Harold* 2650N15 0925

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Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WESTINGHOUSE</u>		SDG/AR/COC/Work Order: <u>365772, 365773</u>	
Received By: <u>GUS CHANDLER</u>		Date Received: <u>26 JAN 15</u>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>	
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice None Other (describe) <u>13°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462966</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other  <u>1Z 222 210 03 9024 5392</u> <u>1Z 222 210 03 9012 5986</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 365772 GEL Work Order: 365772

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365772001  
Matrix: Water  
Collect Date: 12-JAN-15 10:34  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.01	+/-14.1	27.4		pCi/L		MJH1	01/29/15	1351 1453371	1
Americium-241	U	-10.8	+/-30.3	47.5		pCi/L					
Antimony-124	U	2.00	+/-9.37	19.3		pCi/L					
Antimony-125	U	-2.08	+/-8.54	15.0		pCi/L					
Barium-133	U	0.623	+/-6.11	8.21		pCi/L					
Barium-140	U	7.03	+/-30.0	54.9		pCi/L					
Beryllium-7	U	-8.47	+/-37.0	64.3		pCi/L					
Bismuth-212	U	-17.7	+/-57.9	86.2		pCi/L					
Bismuth-214	U	9.84	+/-11.1	15.5		pCi/L					
Cerium-139	U	-0.381	+/-3.86	5.77		pCi/L					
Cerium-141	U	0.731	+/-8.79	13.4		pCi/L					
Cerium-144	U	-8.79	+/-21.6	36.2		pCi/L					
Cesium-134	U	-0.973	+/-3.65	6.63		pCi/L					
Cesium-136	U	-5.57	+/-12.0	19.2		pCi/L					
Cesium-137	U	-2.77	+/-3.40	5.83	10.0	pCi/L					
Chromium-51	U	2.39	+/-45.1	81.0		pCi/L					
Cobalt-56	U	1.39	+/-4.01	7.75		pCi/L					
Cobalt-57	U	0.0838	+/-2.89	5.00		pCi/L					
Cobalt-58	U	-0.687	+/-3.48	6.41		pCi/L					
Cobalt-60	U	5.59	+/-3.40	6.33		pCi/L					
Europium-152	U	-2.22	+/-10.7	18.8		pCi/L					
Europium-154	U	4.59	+/-9.84	20.7		pCi/L					
Europium-155	U	-1.31	+/-12.0	20.6		pCi/L					
Iridium-192	U	-0.426	+/-3.77	6.73		pCi/L					
Iron-59	U	2.73	+/-7.99	15.7		pCi/L					
Lead-210	U	431	+/-1290	2030		pCi/L					
Lead-212	U	1.09	+/-7.70	12.1		pCi/L					
Lead-214	U	10.8	+/-13.2	15.9		pCi/L					
Manganese-54	U	1.02	+/-3.60	6.91		pCi/L					
Mercury-203	U	4.20	+/-4.16	7.97		pCi/L					
Neodymium-147	U	-33.8	+/-66.0	111		pCi/L					
Neptunium-239	U	-16.3	+/-28.8	48.0		pCi/L					
Niobium-94	U	-2.35	+/-4.01	5.93		pCi/L					
Niobium-95	U	2.14	+/-4.07	7.99		pCi/L					
Potassium-40	U	-40.6	+/-56.2	92.0		pCi/L					
Promethium-144	U	4.17	+/-4.33	6.84		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365772001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.251	+/-4.76	8.49	pCi/L
Radium-228	U	6.01	+/-14.1	27.4	pCi/L
Ruthenium-106	U	1.04	+/-30.0	56.6	pCi/L
Silver-110m	U	2.43	+/-3.18	6.45	pCi/L
Sodium-22	U	1.82	+/-3.51	7.42	pCi/L
Thallium-208	U	2.65	+/-6.45	6.27	pCi/L
Thorium-230	U	770	+/-2010	3080	pCi/L
Thorium-234	U	-306	+/-252	392	pCi/L
Tin-113	U	4.31	+/-4.49	8.72	pCi/L
Uranium-235	U	12.8	+/-31.3	41.6	pCi/L
Uranium-238	U	-306	+/-252	392	pCi/L
Yttrium-88	U	3.03	+/-4.64	10.0	pCi/L
Zinc-65	U	13.3	+/-7.16	14.4	pCi/L
Zirconium-95	U	4.91	+/-6.57	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.15	+/-2.46	4.26	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta		11.5	+/-3.34	3.77	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	22.9	+/-131	227	300	pCi/L	MYM1	02/10/15	0551	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 365772002  
Matrix: Water  
Collect Date: 21-JAN-15 11:36  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.7	+/-19.3	33.9		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	-2.95	+/-32.3	54.9		pCi/L					
Antimony-124	U	3.80	+/-9.84	20.0		pCi/L					
Antimony-125	U	0.964	+/-10.1	17.9		pCi/L					
Barium-133	U	-4.25	+/-5.64	7.40		pCi/L					
Barium-140	U	6.67	+/-18.4	35.2		pCi/L					
Beryllium-7	U	0.850	+/-31.3	57.9		pCi/L					
Bismuth-212	U	12.1	+/-49.5	93.2		pCi/L					
Bismuth-214		49.1	+/-13.4	13.4		pCi/L					
Cerium-139	U	-1.6	+/-3.62	5.50		pCi/L					
Cerium-141	U	-0.185	+/-6.34	11.0		pCi/L					
Cerium-144	U	-5.42	+/-22.9	40.6		pCi/L					
Cesium-134	U	-0.429	+/-4.12	7.46		pCi/L					
Cesium-136	U	-1.51	+/-7.32	13.1		pCi/L					
Cesium-137	U	-0.224	+/-3.95	7.20	10.0	pCi/L					
Chromium-51	U	6.21	+/-35.4	63.1		pCi/L					
Cobalt-56	U	-0.0785	+/-3.79	6.94		pCi/L					
Cobalt-57	U	-0.656	+/-2.81	5.00		pCi/L					
Cobalt-58	U	-1.21	+/-3.71	6.55		pCi/L					
Cobalt-60	U	-3.5	+/-3.76	5.44		pCi/L					
Europium-152	U	-6.89	+/-11.1	17.7		pCi/L					
Europium-154	U	4.80	+/-11.6	23.3		pCi/L					
Europium-155	U	8.94	+/-12.4	23.1		pCi/L					
Iridium-192	U	-1.17	+/-3.67	6.31		pCi/L					
Iron-59	U	-5.06	+/-7.60	13.3		pCi/L					
Lead-210	U	-106	+/-1300	2130		pCi/L					
Lead-212	U	6.38	+/-10.4	12.0		pCi/L					
Lead-214		55.0	+/-16.2	13.8		pCi/L					
Manganese-54	U	1.21	+/-3.61	6.85		pCi/L					
Mercury-203	U	-0.0745	+/-3.86	6.79		pCi/L					
Neodymium-147	U	-29.7	+/-35.1	60.1		pCi/L					
Neptunium-239	U	-11.9	+/-33.9	52.6		pCi/L					
Niobium-94	U	-1.02	+/-3.75	6.64		pCi/L					
Niobium-95	U	3.83	+/-4.16	8.19		pCi/L					
Potassium-40	U	-7.45	+/-57.3	96.1		pCi/L					
Promethium-144	U	-0.294	+/-4.03	7.25		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 365772002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.93	+/-4.70	8.50	pCi/L
Radium-228	U	18.7	+/-19.3	33.9	pCi/L
Ruthenium-106	U	0.720	+/-32.1	59.1	pCi/L
Silver-110m	U	1.23	+/-3.74	7.04	pCi/L
Sodium-22	U	1.62	+/-4.07	8.15	pCi/L
Thallium-208	U	0.879	+/-5.10	8.32	pCi/L
Thorium-230	U	779	+/-1910	3310	pCi/L
Thorium-234	U	-347	+/-312	501	pCi/L
Tin-113	U	-1.57	+/-4.66	7.95	pCi/L
Uranium-235	U	-20.5	+/-28.9	41.7	pCi/L
Uranium-238	U	-347	+/-312	501	pCi/L
Yttrium-88	U	3.72	+/-5.46	11.2	pCi/L
Zinc-65	U	6.52	+/-8.66	16.1	pCi/L
Zirconium-95	U	4.48	+/-6.47	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.587	+/-2.14	4.21	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	2.58	+/-2.13	3.33	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.2	+/-120	212	300	pCi/L	MYM1	02/10/15	0608	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365772003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 13:56		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.9	+/-22.5	31.8		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	14.5	+/-29.0	49.6		pCi/L					
Antimony-124	U	-5.44	+/-10.2	17.9		pCi/L					
Antimony-125	U	-5.94	+/-9.90	16.9		pCi/L					
Barium-133	U	-1.87	+/-7.74	8.45		pCi/L					
Barium-140	U	-10.9	+/-22.3	38.0		pCi/L					
Beryllium-7	U	4.17	+/-34.4	62.4		pCi/L					
Bismuth-212	U	-5.54	+/-48.3	90.1		pCi/L					
Bismuth-214		19.8	+/-14.0	12.8		pCi/L					
Cerium-139	U	-1.73	+/-3.19	5.31		pCi/L					
Cerium-141	U	0.668	+/-5.84	10.2		pCi/L					
Cerium-144	U	4.58	+/-21.8	38.4		pCi/L					
Cesium-134	U	1.20	+/-3.88	7.59		pCi/L					
Cesium-136	U	5.41	+/-9.04	18.1		pCi/L					
Cesium-137	UI	0.00	+/-5.91	6.18	10.0	pCi/L					
Chromium-51	U	-26.6	+/-34.7	59.4		pCi/L					
Cobalt-56	U	-4.05	+/-3.80	6.16		pCi/L					
Cobalt-57	U	0.319	+/-2.72	4.80		pCi/L					
Cobalt-58	U	-0.311	+/-3.47	6.51		pCi/L					
Cobalt-60	U	2.87	+/-4.08	8.73		pCi/L					
Europium-152	U	-7.1	+/-9.99	17.1		pCi/L					
Europium-154	U	6.88	+/-13.0	26.6		pCi/L					
Europium-155	U	7.15	+/-11.8	21.7		pCi/L					
Iridium-192	U	0.652	+/-3.63	6.69		pCi/L					
Iron-59	U	2.46	+/-7.49	14.9		pCi/L					
Lead-210	U	-1930	+/-1690	2400		pCi/L					
Lead-212	U	7.80	+/-11.0	13.1		pCi/L					
Lead-214	U	3.12	+/-12.9	17.8		pCi/L					
Manganese-54	U	-1.47	+/-3.77	6.73		pCi/L					
Mercury-203	U	2.49	+/-3.60	6.90		pCi/L					
Neodymium-147	U	-0.283	+/-48.1	86.2		pCi/L					
Neptunium-239	U	-7.0	+/-37.8	53.4		pCi/L					
Niobium-94	U	-1.05	+/-3.19	5.80		pCi/L					
Niobium-95	U	-0.561	+/-4.54	7.40		pCi/L					
Potassium-40	U	29.3	+/-57.4	103		pCi/L					
Promethium-144	U	3.96	+/-3.82	7.76		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 365772003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.639	+/-4.52	8.05	pCi/L
Radium-228	U	11.9	+/-22.5	31.8	pCi/L
Ruthenium-106	U	25.0	+/-33.2	64.4	pCi/L
Silver-110m	U	-0.121	+/-3.33	5.54	pCi/L
Sodium-22	U	2.42	+/-4.58	9.37	pCi/L
Thallium-208	U	6.38	+/-4.24	6.46	pCi/L
Thorium-230	U	277	+/-1790	2920	pCi/L
Thorium-234	U	79.6	+/-356	428	pCi/L
Tin-113	U	-1.11	+/-4.67	8.28	pCi/L
Uranium-235	U	21.5	+/-22.4	37.7	pCi/L
Uranium-238	U	79.6	+/-356	428	pCi/L
Yttrium-88	U	-0.735	+/-6.21	10.7	pCi/L
Zinc-65	U	-4.14	+/-9.13	13.3	pCi/L
Zirconium-95	U	-0.305	+/-6.81	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.51	+/-2.71	4.27	5.00	pCi/L	KXB2	02/15/15	1643	1457183	2
Beta		135	+/-3.58	1.61	5.00	pCi/L					
Alpha		6.84	+/-2.18	2.78	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta		140	+/-3.81	2.50	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	207	+/-131	214	300	pCi/L	MYM1	02/10/15	0625	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365772003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365772004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:15		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.0	+/-21.5	37.4		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	-4.68	+/-25.2	39.2		pCi/L					
Antimony-124	U	0.348	+/-10.2	20.2		pCi/L					
Antimony-125	U	-3.72	+/-12.5	21.2		pCi/L					
Barium-133	U	1.92	+/-5.52	8.83		pCi/L					
Barium-140	U	16.5	+/-21.2	42.2		pCi/L					
Beryllium-7	U	18.7	+/-33.3	64.4		pCi/L					
Bismuth-212	U	-14.5	+/-60.7	107		pCi/L					
Bismuth-214	U	18.3	+/-14.3	22.1		pCi/L					
Cerium-139	U	2.77	+/-3.53	6.59		pCi/L					
Cerium-141	U	-0.012	+/-7.31	12.3		pCi/L					
Cerium-144	U	0.188	+/-24.8	42.1		pCi/L					
Cesium-134	U	4.38	+/-4.44	8.91		pCi/L					
Cesium-136	U	1.68	+/-8.20	16.0		pCi/L					
Cesium-137	U	-1.49	+/-4.64	7.41	10.0	pCi/L					
Chromium-51	U	4.93	+/-41.5	73.8		pCi/L					
Cobalt-56	U	-1.93	+/-4.65	7.99		pCi/L					
Cobalt-57	U	-1.08	+/-3.21	5.37		pCi/L					
Cobalt-58	U	-1.39	+/-3.65	6.38		pCi/L					
Cobalt-60	U	1.27	+/-4.08	8.13		pCi/L					
Europium-152	U	-6.3	+/-12.5	20.4		pCi/L					
Europium-154	U	2.66	+/-12.3	23.9		pCi/L					
Europium-155	U	8.12	+/-12.8	22.7		pCi/L					
Iridium-192	U	-1.43	+/-4.17	7.19		pCi/L					
Iron-59	U	6.19	+/-8.49	17.4		pCi/L					
Lead-210	U	74.8	+/-747	1220		pCi/L					
Lead-212		13.8	+/-11.8	11.0		pCi/L					
Lead-214		22.2	+/-20.1	21.0		pCi/L					
Manganese-54	U	-3.66	+/-4.47	7.13		pCi/L					
Mercury-203	U	-1.18	+/-4.51	7.85		pCi/L					
Neodymium-147	U	1.72	+/-46.7	86.6		pCi/L					
Neptunium-239	U	6.05	+/-33.6	57.9		pCi/L					
Niobium-94	U	-1.74	+/-3.78	6.56		pCi/L					
Niobium-95	U	0.410	+/-4.02	7.42		pCi/L					
Potassium-40	U	60.4	+/-61.4	119		pCi/L					
Promethium-144	U	2.57	+/-3.80	7.36		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365772004	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.52	+/-5.56	8.59	pCi/L
Radium-228	U	19.0	+/-21.5	37.4	pCi/L
Ruthenium-106	U	-20.2	+/-36.0	62.4	pCi/L
Silver-110m	U	-1.08	+/-3.60	6.41	pCi/L
Sodium-22	U	0.797	+/-4.31	8.34	pCi/L
Thallium-208	U	-5.14	+/-5.23	8.31	pCi/L
Thorium-230	U	1160	+/-2010	2460	pCi/L
Thorium-234	U	149	+/-258	347	pCi/L
Tin-113	U	0.886	+/-5.16	9.18	pCi/L
Uranium-235	U	-9.41	+/-28.1	43.0	pCi/L
Uranium-238	U	149	+/-258	347	pCi/L
Yttrium-88	U	1.82	+/-4.32	9.26	pCi/L
Zinc-65	U	-2.47	+/-9.79	15.1	pCi/L
Zirconium-95	U	0.921	+/-6.83	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.17	+/-1.87	2.77	5.00	pCi/L	KXB2	02/15/15	1644	1457183	2
Beta	85.2	+/-3.08	2.63	5.00	pCi/L					
Alpha	3.32	+/-1.48	2.13	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	91.3	+/-2.86	1.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	149	+/-128	213	300	pCi/L	MYM1	02/10/15	0641	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 10  
Sample ID: 365772004

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 365772005  
Matrix: Water  
Collect Date: 19-JAN-15 11:39  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.25	+/-17.9	30.0		pCi/L		MJH1	01/30/15	0911 1453371	1
Americium-241	U	-1.54	+/-12.1	18.9		pCi/L					
Antimony-124	U	-6.98	+/-8.91	14.7		pCi/L					
Antimony-125	U	-3.24	+/-9.91	17.6		pCi/L					
Barium-133	U	-2.65	+/-5.52	9.19		pCi/L					
Barium-140	U	4.42	+/-20.9	38.6		pCi/L					
Beryllium-7	U	35.1	+/-34.1	66.0		pCi/L					
Bismuth-212	U	-23.7	+/-55.1	93.5		pCi/L					
Bismuth-214		20.0	+/-13.2	14.7		pCi/L					
Cerium-139	U	0.290	+/-2.97	5.34		pCi/L					
Cerium-141	U	5.41	+/-6.31	10.6		pCi/L					
Cerium-144	U	15.9	+/-20.8	36.4		pCi/L					
Cesium-134	U	-3.53	+/-4.87	7.04		pCi/L					
Cesium-136	U	10.8	+/-7.58	16.4		pCi/L					
Cesium-137	U	3.73	+/-4.14	7.94	10.0	pCi/L					
Chromium-51	U	-13.7	+/-36.4	61.7		pCi/L					
Cobalt-56	U	-1.02	+/-4.07	7.34		pCi/L					
Cobalt-57	U	-0.265	+/-2.60	4.38		pCi/L					
Cobalt-58	U	3.97	+/-4.87	5.64		pCi/L					
Cobalt-60	U	-0.222	+/-3.53	6.74		pCi/L					
Europium-152	U	9.92	+/-10.5	19.5		pCi/L					
Europium-154	U	-6.12	+/-10.2	17.9		pCi/L					
Europium-155	U	-12.8	+/-10.9	17.3		pCi/L					
Iridium-192	U	-1.93	+/-3.61	6.06		pCi/L					
Iron-59	U	2.52	+/-7.78	14.9		pCi/L					
Lead-210	U	238	+/-370	328		pCi/L					
Lead-212	U	7.15	+/-10.9	10.5		pCi/L					
Lead-214	U	3.34	+/-10.4	17.3		pCi/L					
Manganese-54	U	-0.139	+/-3.85	7.07		pCi/L					
Mercury-203	U	0.869	+/-4.08	7.21		pCi/L					
Neodymium-147	U	-12.9	+/-42.7	75.4		pCi/L					
Neptunium-239	U	-9.04	+/-27.5	45.8		pCi/L					
Niobium-94	U	-0.365	+/-3.43	6.05		pCi/L					
Niobium-95	U	-1.72	+/-3.62	6.44		pCi/L					
Potassium-40	U	45.9	+/-72.4	65.3		pCi/L					
Promethium-144	U	0.935	+/-3.83	6.93		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 365772005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.20	+/-4.46	8.64	pCi/L
Radium-228	U	4.25	+/-17.9	30.0	pCi/L
Ruthenium-106	U	0.604	+/-32.5	58.4	pCi/L
Silver-110m	U	-5.43	+/-3.77	5.77	pCi/L
Sodium-22	U	-2.33	+/-3.55	6.20	pCi/L
Thallium-208	UI	0.00	+/-6.53	5.83	pCi/L
Thorium-230	U	684	+/-921	1510	pCi/L
Thorium-234	U	44.0	+/-185	211	pCi/L
Tin-113	U	-0.807	+/-4.74	8.54	pCi/L
Uranium-235	U	22.7	+/-32.7	38.0	pCi/L
Uranium-238	U	44.0	+/-185	211	pCi/L
Yttrium-88	U	0.00872	+/-4.54	8.85	pCi/L
Zinc-65	U	9.78	+/-7.85	11.9	pCi/L
Zirconium-95	U	-5.2	+/-7.07	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.64	+/-3.76	4.14	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	112	+/-8.92	3.82	5.00	pCi/L					
Alpha	4.31	+/-1.11	1.13	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	116	+/-3.16	1.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	214	+/-131	213	300	pCi/L	MYM1	02/10/15	0658	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R  
Sample ID: 365772005

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365772006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 14:27		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.3	+/-21.1	24.1		pCi/L		MJH1	01/30/15	0913 1453371	1
Americium-241	U	2.90	+/-14.9	24.6		pCi/L					
Antimony-124	U	-7.89	+/-9.07	14.7		pCi/L					
Antimony-125	U	-1.46	+/-8.84	15.6		pCi/L					
Barium-133	U	-3.83	+/-4.67	6.75		pCi/L					
Barium-140	U	35.2	+/-43.2	38.6		pCi/L					
Beryllium-7	U	-17.9	+/-30.7	51.8		pCi/L					
Bismuth-212	U	-20.3	+/-56.4	85.3		pCi/L					
Bismuth-214	UI	0.00	+/-15.3	11.9		pCi/L					
Cerium-139	U	-0.331	+/-2.99	5.11		pCi/L					
Cerium-141	U	-3.01	+/-5.63	9.45		pCi/L					
Cerium-144	U	-5.84	+/-19.4	33.2		pCi/L					
Cesium-134	U	6.87	+/-4.22	8.18		pCi/L					
Cesium-136	U	1.52	+/-7.09	13.3		pCi/L					
Cesium-137	U	0.966	+/-6.80	5.92	10.0	pCi/L					
Chromium-51	U	9.03	+/-30.6	56.3		pCi/L					
Cobalt-56	U	-0.681	+/-3.77	6.76		pCi/L					
Cobalt-57	U	0.756	+/-2.61	4.61		pCi/L					
Cobalt-58	U	-2.63	+/-3.28	5.53		pCi/L					
Cobalt-60	U	-0.419	+/-3.92	7.31		pCi/L					
Europium-152	U	-3.13	+/-9.32	16.4		pCi/L					
Europium-154	U	-2.58	+/-9.80	18.1		pCi/L					
Europium-155	U	-1.44	+/-9.98	17.4		pCi/L					
Iridium-192	U	-1.66	+/-3.25	5.67		pCi/L					
Iron-59	U	-0.00386	+/-7.57	13.8		pCi/L					
Lead-210	U	171	+/-568	591		pCi/L					
Lead-212	U	2.63	+/-8.33	8.69		pCi/L					
Lead-214		23.2	+/-13.4	17.8		pCi/L					
Manganese-54	U	-1.29	+/-3.36	5.92		pCi/L					
Mercury-203	U	2.43	+/-3.63	6.40		pCi/L					
Neodymium-147	U	23.5	+/-38.3	65.3		pCi/L					
Neptunium-239	U	-30.2	+/-26.0	42.5		pCi/L					
Niobium-94	U	0.619	+/-3.29	6.14		pCi/L					
Niobium-95	U	0.563	+/-3.25	6.13		pCi/L					
Potassium-40	U	18.1	+/-46.8	82.9		pCi/L					
Promethium-144	U	-0.0932	+/-3.36	6.15		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365772006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.869	+/-4.02	7.04	pCi/L
Radium-228	U	10.3	+/-21.1	24.1	pCi/L
Ruthenium-106	U	2.35	+/-29.8	55.6	pCi/L
Silver-110m	U	2.60	+/-4.01	5.35	pCi/L
Sodium-22	U	-0.743	+/-3.47	6.46	pCi/L
Thallium-208	U	-3.94	+/-4.26	6.90	pCi/L
Thorium-230	U	493	+/-1410	1740	pCi/L
Thorium-234	U	78.9	+/-236	265	pCi/L
Tin-113	U	0.927	+/-4.20	7.42	pCi/L
Uranium-235	U	-20.8	+/-24.3	35.7	pCi/L
Uranium-238	U	78.9	+/-236	265	pCi/L
Yttrium-88	U	-2.07	+/-3.88	6.69	pCi/L
Zinc-65	U	3.79	+/-8.60	14.5	pCi/L
Zirconium-95	U	3.72	+/-6.19	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.167	+/-1.80	4.05	5.00	pCi/L	KXB2	02/16/15	0931	1457183	2
Beta	U	3.56	+/-2.99	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-13.7	+/-124	217	300	pCi/L	MYM1	02/10/15	0718	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	7.37	+/-17.0	27.1		pCi/L		MJH1	01/30/15	0913	1453371	1
Americium-241	U	-7.99	+/-11.1	19.2		pCi/L						
Antimony-124	U	2.22	+/-8.06	15.9		pCi/L						
Antimony-125	U	4.61	+/-8.51	16.0		pCi/L						
Barium-133	U	2.38	+/-4.45	7.38		pCi/L						
Barium-140	U	10.9	+/-19.8	33.3		pCi/L						
Beryllium-7	U	-15.5	+/-26.6	46.1		pCi/L						
Bismuth-212	U	-40	+/-46.1	76.0		pCi/L						
Bismuth-214		26.8	+/-13.4	11.7		pCi/L						
Cerium-139	U	-0.515	+/-3.01	5.21		pCi/L						
Cerium-141	U	4.20	+/-5.97	10.1		pCi/L						
Cerium-144	U	9.13	+/-18.7	33.7		pCi/L						
Cesium-134	U	1.86	+/-3.83	6.73		pCi/L						
Cesium-136	U	-1.13	+/-6.06	11.2		pCi/L						
Cesium-137	U	5.08	+/-4.77	5.66	10.0	pCi/L						
Chromium-51	U	-2.19	+/-34.2	58.5		pCi/L						
Cobalt-56	U	-0.317	+/-3.49	6.19		pCi/L						
Cobalt-57	U	0.738	+/-2.41	4.31		pCi/L						
Cobalt-58	U	-0.137	+/-3.56	6.35		pCi/L						
Cobalt-60	U	-3.34	+/-3.17	5.07		pCi/L						
Europium-152	U	-6.96	+/-9.76	16.0		pCi/L						
Europium-154	U	0.816	+/-9.48	18.0		pCi/L						
Europium-155	U	5.02	+/-10.9	17.5		pCi/L						
Iridium-192	U	0.680	+/-3.43	5.98		pCi/L						
Iron-59	U	-0.139	+/-6.77	12.7		pCi/L						
Lead-210	U	-101	+/-222	337		pCi/L						
Lead-212	U	0.00833	+/-7.04	11.2		pCi/L						
Lead-214		31.8	+/-12.0	18.1		pCi/L						
Manganese-54	U	-1.17	+/-3.12	5.39		pCi/L						
Mercury-203	U	-0.076	+/-3.54	6.11		pCi/L						
Neodymium-147	U	-7.87	+/-39.7	68.8		pCi/L						
Neptunium-239	U	-33.9	+/-25.6	42.3		pCi/L						
Niobium-94	U	2.28	+/-3.28	6.18		pCi/L						
Niobium-95	U	2.00	+/-3.15	6.05		pCi/L						
Potassium-40	U	0.0666	+/-50.4	87.5		pCi/L						
Promethium-144	U	1.15	+/-3.38	6.20		pCi/L						

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.77	+/-4.08	7.16	pCi/L
Radium-228	U	7.37	+/-17.0	27.1	pCi/L
Ruthenium-106	U	7.26	+/-31.2	56.9	pCi/L
Silver-110m	U	1.31	+/-3.16	5.26	pCi/L
Sodium-22	U	0.287	+/-3.34	6.34	pCi/L
Thallium-208	U	-2.3	+/-4.14	6.36	pCi/L
Thorium-230	U	-244	+/-832	1470	pCi/L
Thorium-234	U	-54.3	+/-121	194	pCi/L
Tin-113	U	1.78	+/-4.04	7.55	pCi/L
Uranium-235	U	11.4	+/-22.1	35.1	pCi/L
Uranium-238	U	-54.3	+/-121	194	pCi/L
Yttrium-88	U	2.77	+/-3.55	7.76	pCi/L
Zinc-65	U	-3.49	+/-7.31	10.9	pCi/L
Zirconium-95	U	1.60	+/-5.86	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.34	+/-3.10	3.59	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta	207	+/-10.5	4.67	5.00	pCi/L					
Alpha	3.76	+/-0.951	0.941	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	196	+/-4.09	2.18	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	308	+/-133	211	300	pCi/L	MYM1	02/10/15	0735	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	365772008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.55	+/-12.5	25.0		pCi/L		MJH1	01/30/15	0913 1453371	1
Americium-241	U	-6.42	+/-30.3	47.8		pCi/L					
Antimony-124	U	-0.112	+/-8.18	16.3		pCi/L					
Antimony-125	U	0.681	+/-9.34	16.8		pCi/L					
Barium-133	U	-2.5	+/-4.99	7.41		pCi/L					
Barium-140	U	2.36	+/-19.4	35.3		pCi/L					
Beryllium-7	U	35.9	+/-29.9	55.6		pCi/L					
Bismuth-212	U	7.25	+/-58.3	92.2		pCi/L					
Bismuth-214		22.3	+/-15.2	11.9		pCi/L					
Cerium-139	U	2.37	+/-3.34	5.91		pCi/L					
Cerium-141	U	-2.24	+/-6.12	10.2		pCi/L					
Cerium-144	U	-11.4	+/-21.8	36.2		pCi/L					
Cesium-134	U	-2.03	+/-3.40	5.94		pCi/L					
Cesium-136	U	0.582	+/-9.28	14.7		pCi/L					
Cesium-137	U	-2.08	+/-4.05	7.16	10.0	pCi/L					
Chromium-51	U	-2.72	+/-36.9	65.8		pCi/L					
Cobalt-56	U	1.61	+/-3.79	7.39		pCi/L					
Cobalt-57	U	-0.205	+/-2.85	4.89		pCi/L					
Cobalt-58	U	3.64	+/-3.18	6.84		pCi/L					
Cobalt-60	U	0.227	+/-3.21	6.47		pCi/L					
Europium-152	U	7.11	+/-10.0	19.0		pCi/L					
Europium-154	U	-0.231	+/-9.17	16.0		pCi/L					
Europium-155	U	-2.76	+/-12.0	20.6		pCi/L					
Iridium-192	U	-1.46	+/-3.96	6.91		pCi/L					
Iron-59	U	11.0	+/-8.97	15.2		pCi/L					
Lead-210	U	282	+/-1240	1930		pCi/L					
Lead-212	U	8.88	+/-10.0	13.3		pCi/L					
Lead-214	UI	0.00	+/-16.0	20.0		pCi/L					
Manganese-54	U	0.0963	+/-3.79	6.19		pCi/L					
Mercury-203	U	2.24	+/-3.70	6.93		pCi/L					
Neodymium-147	U	-28.9	+/-38.2	62.5		pCi/L					
Neptunium-239	U	-9.29	+/-31.4	53.3		pCi/L					
Niobium-94	U	1.59	+/-3.39	6.57		pCi/L					
Niobium-95	U	1.95	+/-3.52	6.36		pCi/L					
Potassium-40	U	-13.5	+/-62.9	110		pCi/L					
Promethium-144	U	1.16	+/-3.54	6.77		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16  
Sample ID: 365772008

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.712	+/-4.74	8.54	pCi/L
Radium-228	U	8.55	+/-12.5	25.0	pCi/L
Ruthenium-106	U	21.6	+/-33.6	66.0	pCi/L
Silver-110m	U	0.368	+/-3.51	6.62	pCi/L
Sodium-22	U	-0.0149	+/-3.24	5.67	pCi/L
Thallium-208	U	1.99	+/-5.12	6.56	pCi/L
Thorium-230	U	-2660	+/-2070	2870	pCi/L
Thorium-234	U	-220	+/-255	405	pCi/L
Tin-113	U	3.85	+/-4.86	9.19	pCi/L
Uranium-235	U	12.8	+/-25.9	38.2	pCi/L
Uranium-238	U	-220	+/-255	405	pCi/L
Yttrium-88	U	-0.478	+/-3.91	7.58	pCi/L
Zinc-65	U	-2.06	+/-9.10	16.2	pCi/L
Zirconium-95	U	1.27	+/-6.44	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.99	+/-3.05	4.07	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta		19.6	+/-4.21	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-57	+/-121	215	300	pCi/L	MYM1	02/10/15	0752	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365772009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:20		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.4	+/-18.0	29.1		pCi/L		MJH1	01/30/15	0914 1453371	1
Americium-241	U	30.2	+/-32.8	52.6		pCi/L					
Antimony-124	U	2.37	+/-8.71	17.9		pCi/L					
Antimony-125	U	2.48	+/-9.61	17.6		pCi/L					
Barium-133	U	3.54	+/-4.66	8.01		pCi/L					
Barium-140	U	6.70	+/-26.9	40.1		pCi/L					
Beryllium-7	U	-1.67	+/-33.4	59.0		pCi/L					
Bismuth-212	U	22.3	+/-55.2	105		pCi/L					
Bismuth-214		26.7	+/-17.1	14.4		pCi/L					
Cerium-139	U	1.84	+/-3.38	5.97		pCi/L					
Cerium-141	U	-1.19	+/-6.63	11.3		pCi/L					
Cerium-144	U	-9.05	+/-23.0	39.0		pCi/L					
Cesium-134	U	0.600	+/-4.71	8.68		pCi/L					
Cesium-136	U	2.11	+/-7.56	15.1		pCi/L					
Cesium-137	U	2.52	+/-3.62	7.21	10.0	pCi/L					
Chromium-51	U	17.7	+/-36.8	68.2		pCi/L					
Cobalt-56	U	-1.91	+/-4.13	6.39		pCi/L					
Cobalt-57	U	-0.627	+/-2.92	5.01		pCi/L					
Cobalt-58	U	-1.86	+/-4.30	7.50		pCi/L					
Cobalt-60	U	7.75	+/-4.99	10.9		pCi/L					
Europium-152	U	6.92	+/-10.8	19.8		pCi/L					
Europium-154	U	-1.77	+/-13.0	24.0		pCi/L					
Europium-155	U	1.16	+/-12.8	21.5		pCi/L					
Iridium-192	U	-1.51	+/-3.75	6.55		pCi/L					
Iron-59	U	0.158	+/-8.11	15.5		pCi/L					
Lead-210	U	-839	+/-1260	1990		pCi/L					
Lead-212	U	0.706	+/-9.64	14.0		pCi/L					
Lead-214		52.4	+/-15.1	23.0		pCi/L					
Manganese-54	U	-0.15	+/-3.35	6.18		pCi/L					
Mercury-203	U	-2.84	+/-3.92	6.74		pCi/L					
Neodymium-147	U	47.2	+/-59.9	78.3		pCi/L					
Neptunium-239	U	-7.57	+/-34.0	54.4		pCi/L					
Niobium-94	U	-1.4	+/-4.63	7.05		pCi/L					
Niobium-95	U	0.419	+/-4.31	7.95		pCi/L					
Potassium-40	U	-62.5	+/-51.5	80.5		pCi/L					
Promethium-144	U	-3.12	+/-3.88	6.36		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17  
Sample ID: 365772009

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.01	+/-4.65	7.77	pCi/L
Radium-228	U	-11.4	+/-18.0	29.1	pCi/L
Ruthenium-106	U	-4.17	+/-34.1	62.4	pCi/L
Silver-110m	U	-4.45	+/-3.76	5.29	pCi/L
Sodium-22	U	0.361	+/-4.43	8.46	pCi/L
Thallium-208	U	-1.24	+/-4.98	8.10	pCi/L
Thorium-230	U	1660	+/-2200	2860	pCi/L
Thorium-234	U	154	+/-315	439	pCi/L
Tin-113	U	0.0939	+/-4.44	7.97	pCi/L
Uranium-235	U	5.91	+/-23.5	41.0	pCi/L
Uranium-238	U	154	+/-315	439	pCi/L
Yttrium-88	U	-0.0631	+/-4.19	8.36	pCi/L
Zinc-65	U	0.503	+/-9.38	15.6	pCi/L
Zirconium-95	U	2.07	+/-7.30	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.00	+/-3.18	4.18	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta		491	+/-18.1	3.42	5.00	pCi/L					
Alpha		1.87	+/-0.784	0.980	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta		448	+/-6.01	1.73	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	734	+/-149	212	300	pCi/L	MYM1	02/10/15	0808	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365772009	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365772010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	9.18	+/-26.3	34.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	2.06	+/-22.3	40.6		pCi/L					
Antimony-124	U	3.72	+/-10.8	21.6		pCi/L					
Antimony-125	U	1.39	+/-11.0	19.5		pCi/L					
Barium-133	U	-1.16	+/-6.09	8.67		pCi/L					
Barium-140	U	5.13	+/-22.8	42.6		pCi/L					
Beryllium-7	U	1.64	+/-39.3	60.1		pCi/L					
Bismuth-212	U	-53.5	+/-67.0	92.9		pCi/L					
Bismuth-214	U	12.9	+/-17.7	14.2		pCi/L					
Cerium-139	U	0.698	+/-3.52	6.07		pCi/L					
Cerium-141	U	5.31	+/-8.56	11.3		pCi/L					
Cerium-144	U	-0.351	+/-22.8	39.5		pCi/L					
Cesium-134	U	4.74	+/-4.23	8.47		pCi/L					
Cesium-136	U	2.80	+/-9.92	17.7		pCi/L					
Cesium-137	U	0.814	+/-4.17	7.68	10.0	pCi/L					
Chromium-51	U	-26.1	+/-38.1	64.7		pCi/L					
Cobalt-56	U	-1.8	+/-4.36	7.47		pCi/L					
Cobalt-57	U	-3.31	+/-2.95	4.86		pCi/L					
Cobalt-58	U	-1.94	+/-4.08	6.98		pCi/L					
Cobalt-60	U	4.36	+/-4.92	8.74		pCi/L					
Europium-152	U	-0.71	+/-11.2	19.8		pCi/L					
Europium-154	U	-8.07	+/-12.3	20.8		pCi/L					
Europium-155	U	-0.658	+/-12.4	21.6		pCi/L					
Iridium-192	U	1.68	+/-3.91	7.13		pCi/L					
Iron-59	UI	0.00	+/-16.8	15.6		pCi/L					
Lead-210	U	-94.3	+/-828	1200		pCi/L					
Lead-212	U	0.320	+/-11.3	12.9		pCi/L					
Lead-214	U	13.2	+/-16.0	19.1		pCi/L					
Manganese-54	U	1.62	+/-4.75	7.81		pCi/L					
Mercury-203	U	0.359	+/-4.20	7.53		pCi/L					
Neodymium-147	U	13.3	+/-45.3	85.4		pCi/L					
Neptunium-239	U	-30.5	+/-30.9	51.4		pCi/L					
Niobium-94	U	0.885	+/-3.37	6.28		pCi/L					
Niobium-95	U	2.81	+/-7.83	7.77		pCi/L					
Potassium-40	U	38.6	+/-77.8	66.5		pCi/L					
Promethium-144	U	1.68	+/-3.65	6.87		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 365772010

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.09	+/-5.48	8.72	pCi/L
Radium-228	U	9.18	+/-26.3	34.1	pCi/L
Ruthenium-106	U	18.8	+/-46.0	66.7	pCi/L
Silver-110m	U	0.139	+/-3.86	7.02	pCi/L
Sodium-22	U	-2.84	+/-4.35	7.34	pCi/L
Thallium-208	U	1.34	+/-7.30	6.94	pCi/L
Thorium-230	U	890	+/-1450	2660	pCi/L
Thorium-234	U	-270	+/-257	425	pCi/L
Tin-113	U	0.500	+/-5.15	9.12	pCi/L
Uranium-235	U	23.2	+/-29.3	45.1	pCi/L
Uranium-238	U	-270	+/-257	425	pCi/L
Yttrium-88	U	1.17	+/-4.57	9.18	pCi/L
Zinc-65	U	11.4	+/-11.6	14.5	pCi/L
Zirconium-95	U	-0.692	+/-7.45	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	14.3	+/-6.20	8.90	5.00	pCi/L	KXB2	02/15/15	1644	1457183	2
Beta	214	+/-8.57	7.68	5.00	pCi/L					
Alpha	21.2	+/-6.32	7.46	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	199	+/-7.12	3.65	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	336	+/-128	200	300	pCi/L	MYM1	02/10/15	1554	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365772010	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	365772011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 10:40		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.3	+/-17.9	30.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	7.92	+/-38.5	58.0		pCi/L					
Antimony-124	U	-10.1	+/-11.9	12.2		pCi/L					
Antimony-125	U	7.74	+/-10.0	18.9		pCi/L					
Barium-133	U	0.995	+/-5.60	8.75		pCi/L					
Barium-140	U	-4.95	+/-19.5	34.3		pCi/L					
Beryllium-7	U	9.87	+/-33.2	60.7		pCi/L					
Bismuth-212	U	28.0	+/-54.9	103		pCi/L					
Bismuth-214	U	4.49	+/-16.5	15.0		pCi/L					
Cerium-139	U	0.158	+/-3.40	6.05		pCi/L					
Cerium-141	U	4.08	+/-7.66	12.2		pCi/L					
Cerium-144	U	-0.988	+/-23.6	41.9		pCi/L					
Cesium-134	U	1.09	+/-3.84	7.17		pCi/L					
Cesium-136	U	2.79	+/-7.06	14.0		pCi/L					
Cesium-137	U	0.0653	+/-4.73	8.37	10.0	pCi/L					
Chromium-51	U	56.8	+/-50.3	62.0		pCi/L					
Cobalt-56	U	-0.747	+/-4.87	7.66		pCi/L					
Cobalt-57	U	0.459	+/-3.09	5.55		pCi/L					
Cobalt-58	U	0.841	+/-3.61	6.71		pCi/L					
Cobalt-60	U	0.605	+/-3.71	7.26		pCi/L					
Europium-152	U	11.8	+/-11.4	20.7		pCi/L					
Europium-154	U	9.11	+/-14.0	20.7		pCi/L					
Europium-155	U	11.2	+/-17.0	24.8		pCi/L					
Iridium-192	U	2.29	+/-4.52	7.25		pCi/L					
Iron-59	U	1.72	+/-8.23	15.8		pCi/L					
Lead-210	U	195	+/-1180	2020		pCi/L					
Lead-212	U	8.52	+/-10.2	11.1		pCi/L					
Lead-214		25.0	+/-16.9	20.0		pCi/L					
Manganese-54	U	-1.76	+/-3.82	6.82		pCi/L					
Mercury-203	U	-0.668	+/-4.15	7.09		pCi/L					
Neodymium-147	U	-11.6	+/-41.7	72.8		pCi/L					
Neptunium-239	U	-6.14	+/-32.7	57.9		pCi/L					
Niobium-94	U	0.775	+/-4.09	7.36		pCi/L					
Niobium-95	U	0.573	+/-4.29	7.73		pCi/L					
Potassium-40	U	-58.4	+/-47.0	85.1		pCi/L					
Promethium-144	U	-1.77	+/-3.92	6.67		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 365772011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.31	+/-4.80	8.96	pCi/L
Radium-228	U	-11.3	+/-17.9	30.1	pCi/L
Ruthenium-106	U	-15.9	+/-37.5	54.4	pCi/L
Silver-110m	U	0.984	+/-4.10	7.44	pCi/L
Sodium-22	U	3.21	+/-4.93	6.17	pCi/L
Thallium-208	U	1.90	+/-5.25	8.84	pCi/L
Thorium-230	UI	0.00	+/-2540	3470	pCi/L
Thorium-234	U	72.9	+/-401	436	pCi/L
Tin-113	U	-2.86	+/-4.88	8.31	pCi/L
Uranium-235	U	18.3	+/-31.6	44.5	pCi/L
Uranium-238	U	72.9	+/-401	436	pCi/L
Yttrium-88	U	0.175	+/-3.93	7.78	pCi/L
Zinc-65	U	1.21	+/-8.97	14.9	pCi/L
Zirconium-95	U	-1.41	+/-7.72	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.369	+/-1.96	4.01	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	0.724	+/-2.42	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	5.19	+/-125	217	300	pCi/L	MYM1	02/10/15	0841	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	365772012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:16		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.18	+/-16.8	28.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	20.2	+/-26.5	38.4		pCi/L					
Antimony-124	U	-5.45	+/-10.0	17.5		pCi/L					
Antimony-125	U	8.45	+/-10.7	19.8		pCi/L					
Barium-133	U	0.760	+/-6.00	9.15		pCi/L					
Barium-140	U	-10.3	+/-22.2	39.0		pCi/L					
Beryllium-7	U	1.50	+/-38.2	66.8		pCi/L					
Bismuth-212	U	6.50	+/-53.8	97.8		pCi/L					
Bismuth-214	U	15.4	+/-17.5	19.0		pCi/L					
Cerium-139	U	-0.167	+/-3.42	5.88		pCi/L					
Cerium-141	U	6.89	+/-8.40	12.5		pCi/L					
Cerium-144	U	-24.8	+/-29.0	41.1		pCi/L					
Cesium-134	U	3.66	+/-4.83	9.13		pCi/L					
Cesium-136	U	-1.87	+/-9.30	16.7		pCi/L					
Cesium-137	U	-0.963	+/-4.38	7.72	10.0	pCi/L					
Chromium-51	U	-25	+/-41.2	70.2		pCi/L					
Cobalt-56	U	-0.624	+/-6.48	8.59		pCi/L					
Cobalt-57	U	-2.8	+/-3.27	5.48		pCi/L					
Cobalt-58	U	1.09	+/-4.10	7.53		pCi/L					
Cobalt-60	U	-2.57	+/-4.39	7.43		pCi/L					
Europium-152	U	-11.9	+/-12.3	19.8		pCi/L					
Europium-154	U	2.69	+/-12.7	20.7		pCi/L					
Europium-155	U	-0.24	+/-14.9	22.6		pCi/L					
Iridium-192	U	2.05	+/-4.11	7.45		pCi/L					
Iron-59	U	0.983	+/-8.37	15.6		pCi/L					
Lead-210	U	-155	+/-709	981		pCi/L					
Lead-212	U	5.06	+/-15.2	13.5		pCi/L					
Lead-214	U	15.8	+/-12.3	18.9		pCi/L					
Manganese-54	U	-0.974	+/-4.00	6.98		pCi/L					
Mercury-203	U	3.27	+/-4.24	7.81		pCi/L					
Neodymium-147	U	46.1	+/-48.2	93.5		pCi/L					
Neptunium-239	U	-16.4	+/-35.0	59.8		pCi/L					
Niobium-94	U	-3.43	+/-3.95	6.55		pCi/L					
Niobium-95	U	2.53	+/-4.63	7.61		pCi/L					
Potassium-40	U	-5.72	+/-53.8	94.1		pCi/L					
Promethium-144	U	1.75	+/-4.99	7.93		pCi/L					



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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22 Project: WNUC00127  
Sample ID: 365772012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.72	+/-6.42	9.80	pCi/L
Radium-228	U	7.18	+/-16.8	28.1	pCi/L
Ruthenium-106	U	7.19	+/-37.5	64.6	pCi/L
Silver-110m	U	1.83	+/-3.84	7.17	pCi/L
Sodium-22	U	0.946	+/-4.46	7.29	pCi/L
Thallium-208	U	-0.112	+/-5.09	8.12	pCi/L
Thorium-230	U	1320	+/-1460	2440	pCi/L
Thorium-234	U	57.7	+/-197	299	pCi/L
Tin-113	U	-3.16	+/-6.62	8.76	pCi/L
Uranium-235	U	39.7	+/-36.7	42.0	pCi/L
Uranium-238	U	57.7	+/-197	299	pCi/L
Yttrium-88	U	-0.207	+/-4.06	7.76	pCi/L
Zinc-65	U	4.19	+/-8.73	12.8	pCi/L
Zirconium-95	U	2.37	+/-7.12	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.25	+/-4.51	4.84	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta	48.1	+/-5.93	3.27	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	29.0	+/-123	213	300	pCi/L	MYM1	02/10/15	0858	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 365772013  
Matrix: Water  
Collect Date: 20-JAN-15 14:03  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-18.9	+/-18.9	28.6		pCi/L		MJH1	01/30/15	0929 1453371	1
Americium-241	U	13.6	+/-21.9	36.0		pCi/L					
Antimony-124	U	-2.68	+/-9.28	17.2		pCi/L					
Antimony-125	U	10.4	+/-12.3	20.7		pCi/L					
Barium-133	U	2.85	+/-5.65	9.22		pCi/L					
Barium-140	U	3.33	+/-25.3	45.5		pCi/L					
Beryllium-7	U	38.5	+/-37.1	70.6		pCi/L					
Bismuth-212	U	-37.6	+/-67.4	95.3		pCi/L					
Bismuth-214		19.4	+/-14.0	14.3		pCi/L					
Cerium-139	U	-1.04	+/-3.50	6.00		pCi/L					
Cerium-141	U	-0.948	+/-6.82	11.8		pCi/L					
Cerium-144	U	-0.87	+/-26.2	44.1		pCi/L					
Cesium-134	U	-0.72	+/-4.55	7.47		pCi/L					
Cesium-136	U	-1.37	+/-9.91	15.4		pCi/L					
Cesium-137	U	-0.614	+/-4.95	7.97	10.0	pCi/L					
Chromium-51	U	-3.69	+/-46.7	72.8		pCi/L					
Cobalt-56	U	3.39	+/-4.74	8.24		pCi/L					
Cobalt-57	U	-1.92	+/-3.19	5.45		pCi/L					
Cobalt-58	U	1.91	+/-4.48	7.58		pCi/L					
Cobalt-60	U	-0.91	+/-3.75	6.43		pCi/L					
Europium-152	U	0.540	+/-12.8	21.9		pCi/L					
Europium-154	U	-3.8	+/-10.2	18.1		pCi/L					
Europium-155	U	6.51	+/-12.5	22.6		pCi/L					
Iridium-192	U	2.37	+/-3.77	7.58		pCi/L					
Iron-59	U	0.726	+/-7.60	14.3		pCi/L					
Lead-210	U	420	+/-989	848		pCi/L					
Lead-212	UI	0.00	+/-14.4	14.2		pCi/L					
Lead-214	U	16.5	+/-16.5	20.8		pCi/L					
Manganese-54	U	1.16	+/-5.10	8.25		pCi/L					
Mercury-203	U	-2.31	+/-4.46	7.39		pCi/L					
Neodymium-147	U	-12	+/-50.7	88.7		pCi/L					
Neptunium-239	U	-13.6	+/-34.6	59.6		pCi/L					
Niobium-94	U	1.81	+/-4.02	7.35		pCi/L					
Niobium-95	U	-2.84	+/-6.30	8.58		pCi/L					
Potassium-40	U	-37.5	+/-57.7	86.1		pCi/L					
Promethium-144	U	2.48	+/-4.22	7.78		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 365772013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.91	+/-4.88	8.99	pCi/L
Radium-228	U	-18.9	+/-18.9	28.6	pCi/L
Ruthenium-106	U	1.79	+/-37.4	66.7	pCi/L
Silver-110m	U	-1.5	+/-4.12	7.07	pCi/L
Sodium-22	U	-1.95	+/-3.68	6.37	pCi/L
Thallium-208	U	-2.83	+/-5.00	7.35	pCi/L
Thorium-230	UI	0.00	+/-2200	2100	pCi/L
Thorium-234	U	110	+/-193	278	pCi/L
Tin-113	U	2.07	+/-5.61	10.2	pCi/L
Uranium-235	U	-1.12	+/-30.8	41.6	pCi/L
Uranium-238	U	110	+/-193	278	pCi/L
Yttrium-88	U	-0.0413	+/-3.09	6.26	pCi/L
Zinc-65	U	-3.73	+/-9.28	13.7	pCi/L
Zirconium-95	U	-1.49	+/-7.06	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.29	+/-2.51	4.61	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	0.302	+/-2.13	3.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	5.46	+/-120	208	300	pCi/L	MYM1	02/10/15	0914	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	365772014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 08:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.65	+/-23.7	39.5		pCi/L		MJH1	01/30/15	1002 1453371	1
Americium-241	U	-2.47	+/-6.84	10.0		pCi/L					
Antimony-124	U	2.77	+/-10.2	21.3		pCi/L					
Antimony-125	U	1.10	+/-9.95	18.3		pCi/L					
Barium-133	U	-0.816	+/-5.25	8.30		pCi/L					
Barium-140	U	14.0	+/-24.6	46.6		pCi/L					
Beryllium-7	U	-7.57	+/-36.7	65.0		pCi/L					
Bismuth-212	U	29.1	+/-62.7	122		pCi/L					
Bismuth-214		20.0	+/-16.8	16.4		pCi/L					
Cerium-139	U	-1.18	+/-2.86	4.89		pCi/L					
Cerium-141	U	-0.833	+/-5.38	9.40		pCi/L					
Cerium-144	U	12.6	+/-18.2	33.5		pCi/L					
Cesium-134	U	-1.53	+/-4.66	8.44		pCi/L					
Cesium-136	U	-9.53	+/-10.3	16.6		pCi/L					
Cesium-137	U	0.686	+/-4.64	8.41	10.0	pCi/L					
Chromium-51	U	39.3	+/-36.6	71.6		pCi/L					
Cobalt-56	U	-1.76	+/-4.97	8.87		pCi/L					
Cobalt-57	U	0.0612	+/-2.25	4.01		pCi/L					
Cobalt-58	U	2.71	+/-6.73	8.89		pCi/L					
Cobalt-60	U	3.07	+/-4.25	9.22		pCi/L					
Europium-152	U	-6.82	+/-10.6	18.5		pCi/L					
Europium-154	U	-0.748	+/-14.5	28.0		pCi/L					
Europium-155	U	-5.61	+/-9.69	15.6		pCi/L					
Iridium-192	U	-2.46	+/-3.62	6.33		pCi/L					
Iron-59	U	-2.61	+/-11.3	18.2		pCi/L					
Lead-210	U	12.0	+/-105	106		pCi/L					
Lead-212	U	0.526	+/-9.38	13.8		pCi/L					
Lead-214		22.7	+/-17.1	14.8		pCi/L					
Manganese-54	U	-2.12	+/-4.11	7.25		pCi/L					
Mercury-203	U	-0.072	+/-4.09	6.98		pCi/L					
Neodymium-147	U	6.90	+/-48.3	88.4		pCi/L					
Neptunium-239	U	7.65	+/-22.9	41.7		pCi/L					
Niobium-94	U	0.402	+/-4.14	7.81		pCi/L					
Niobium-95	U	3.08	+/-4.46	8.94		pCi/L					
Potassium-40	UI	0.00	+/-59.8	72.9		pCi/L					
Promethium-144	U	-2.29	+/-4.76	8.47		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24

Sample ID: 365772014

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.35	+/-4.65	9.01	pCi/L
Radium-228	U	2.65	+/-23.7	39.5	pCi/L
Ruthenium-106	U	4.75	+/-39.3	71.0	pCi/L
Silver-110m	U	0.377	+/-4.61	7.29	pCi/L
Sodium-22	U	-0.183	+/-5.11	9.90	pCi/L
Thallium-208	U	4.87	+/-6.94	7.22	pCi/L
Thorium-230	U	579	+/-566	991	pCi/L
Thorium-234	UI	0.00	+/-113	99.5	pCi/L
Tin-113	U	-2.66	+/-4.72	8.20	pCi/L
Uranium-235	U	-11.3	+/-21.7	33.8	pCi/L
Uranium-238	UI	0.00	+/-113	99.5	pCi/L
Yttrium-88	U	2.74	+/-4.01	9.56	pCi/L
Zinc-65	U	4.76	+/-10.9	18.9	pCi/L
Zirconium-95	U	-2.15	+/-7.93	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.08	+/-2.16	4.01	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	2.53	+/-2.65	4.38	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	27.4	+/-125	217	300	pCi/L	MYM1	02/10/15	0931	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	365772015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:12		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.66	+/-18.6	31.3		pCi/L		MJH1	01/30/15	1003 1453371	1
Americium-241	U	-0.475	+/-5.43	8.65		pCi/L					
Antimony-124	U	-7.82	+/-11.4	19.3		pCi/L					
Antimony-125	U	7.36	+/-9.51	16.1		pCi/L					
Barium-133	U	-0.944	+/-4.53	6.83		pCi/L					
Barium-140	U	-24.3	+/-30.4	51.7		pCi/L					
Beryllium-7	U	-12.9	+/-36.6	59.0		pCi/L					
Bismuth-212	U	-24.9	+/-49.5	84.7		pCi/L					
Bismuth-214		16.7	+/-14.6	12.9		pCi/L					
Cerium-139	U	-2.21	+/-2.74	4.40		pCi/L					
Cerium-141	U	-1.67	+/-6.20	10.4		pCi/L					
Cerium-144	U	2.95	+/-17.3	28.7		pCi/L					
Cesium-134	U	2.49	+/-4.54	8.56		pCi/L					
Cesium-136	U	7.58	+/-14.5	28.1		pCi/L					
Cesium-137	U	-0.122	+/-3.56	6.47	10.0	pCi/L					
Chromium-51	U	-10.4	+/-39.1	67.8		pCi/L					
Cobalt-56	U	-1.22	+/-4.25	7.73		pCi/L					
Cobalt-57	U	-1.09	+/-2.07	3.46		pCi/L					
Cobalt-58	U	1.63	+/-4.11	7.76		pCi/L					
Cobalt-60	UI	0.00	+/-5.68	5.66		pCi/L					
Europium-152	U	-9.27	+/-10.2	16.0		pCi/L					
Europium-154	U	-5.49	+/-9.54	16.3		pCi/L					
Europium-155	U	-5.04	+/-8.88	14.0		pCi/L					
Iridium-192	U	2.49	+/-3.43	6.39		pCi/L					
Iron-59	U	2.94	+/-9.97	19.0		pCi/L					
Lead-210	U	-85.1	+/-66.7	114		pCi/L					
Lead-212	U	3.80	+/-7.36	10.7		pCi/L					
Lead-214	U	8.24	+/-11.1	14.9		pCi/L					
Manganese-54	U	-3.85	+/-3.75	6.27		pCi/L					
Mercury-203	U	2.28	+/-4.02	7.38		pCi/L					
Neodymium-147	U	-13.7	+/-66.1	119		pCi/L					
Neptunium-239	U	-5.84	+/-22.1	37.7		pCi/L					
Niobium-94	U	2.12	+/-3.36	6.45		pCi/L					
Niobium-95	U	0.928	+/-4.35	7.99		pCi/L					
Potassium-40	U	47.7	+/-49.9	63.4		pCi/L					
Promethium-144	U	3.22	+/-3.89	7.48		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 26 Project: WNUC00127  
Sample ID: 365772015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.96	+/-4.58	6.99	pCi/L
Radium-228	U	1.66	+/-18.6	31.3	pCi/L
Ruthenium-106	U	22.8	+/-30.5	59.9	pCi/L
Silver-110m	U	-1.63	+/-3.41	5.90	pCi/L
Sodium-22	U	-1.93	+/-3.38	5.78	pCi/L
Thallium-208	U	-2.01	+/-4.16	6.62	pCi/L
Thorium-230	U	28.2	+/-520	830	pCi/L
Thorium-234	U	30.9	+/-94.1	85.8	pCi/L
Tin-113	U	0.763	+/-4.58	8.15	pCi/L
Uranium-235	U	-13.2	+/-22.6	32.2	pCi/L
Uranium-238	U	30.9	+/-94.1	85.8	pCi/L
Yttrium-88	U	-2.15	+/-3.67	6.37	pCi/L
Zinc-65	U	-2.46	+/-10.3	15.7	pCi/L
Zirconium-95	U	-1.32	+/-7.54	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.189	+/-1.84	4.24	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta		11.6	+/-3.51	4.21	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-39.8	+/-118	209	300	pCi/L	MYM1	02/10/15	0948	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	365772016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	22.4	+/-23.6	29.0		pCi/L		MJH1	01/30/15	1003 1453371	1
Americium-241	U	-3.19	+/-11.1	17.2		pCi/L					
Antimony-124	U	-4.41	+/-7.56	12.9		pCi/L					
Antimony-125	U	-0.375	+/-8.36	14.7		pCi/L					
Barium-133	U	3.61	+/-5.67	7.04		pCi/L					
Barium-140	U	2.77	+/-15.7	29.4		pCi/L					
Beryllium-7	U	38.2	+/-56.3	45.7		pCi/L					
Bismuth-212	U	28.7	+/-47.5	81.1		pCi/L					
Bismuth-214		24.9	+/-14.3	10.1		pCi/L					
Cerium-139	U	-1.84	+/-2.91	4.75		pCi/L					
Cerium-141	U	6.67	+/-7.67	8.06		pCi/L					
Cerium-144	U	4.24	+/-18.0	31.2		pCi/L					
Cesium-134	U	-0.74	+/-3.50	6.23		pCi/L					
Cesium-136	U	-0.142	+/-7.89	12.2		pCi/L					
Cesium-137	U	-2.44	+/-3.29	5.63	10.0	pCi/L					
Chromium-51	U	-23.6	+/-29.9	50.5		pCi/L					
Cobalt-56	U	-0.857	+/-3.49	6.15		pCi/L					
Cobalt-57	U	2.24	+/-2.40	4.31		pCi/L					
Cobalt-58	U	-1.34	+/-3.33	5.80		pCi/L					
Cobalt-60	U	2.74	+/-3.24	6.70		pCi/L					
Europium-152	U	-0.87	+/-8.89	15.6		pCi/L					
Europium-154	U	-4.96	+/-9.50	16.7		pCi/L					
Europium-155	U	4.71	+/-9.48	16.8		pCi/L					
Iridium-192	U	1.64	+/-3.17	5.80		pCi/L					
Iron-59	U	-1.57	+/-6.22	11.4		pCi/L					
Lead-210	U	-97.8	+/-243	380		pCi/L					
Lead-212	U	2.65	+/-8.98	9.70		pCi/L					
Lead-214		29.0	+/-9.66	12.1		pCi/L					
Manganese-54	U	-2.42	+/-3.85	5.37		pCi/L					
Mercury-203	U	-0.0579	+/-4.12	6.05		pCi/L					
Neodymium-147	U	23.3	+/-33.7	62.6		pCi/L					
Neptunium-239	U	-12.7	+/-23.7	39.7		pCi/L					
Niobium-94	U	2.07	+/-3.54	5.89		pCi/L					
Niobium-95	U	-0.123	+/-3.11	5.65		pCi/L					
Potassium-40	U	24.0	+/-58.2	89.4		pCi/L					
Promethium-144	U	-1.78	+/-3.30	5.72		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27 Project: WNUC00127  
Sample ID: 365772016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.594	+/-4.00	6.93	pCi/L
Radium-228	U	22.4	+/-23.6	29.0	pCi/L
Ruthenium-106	U	-3.29	+/-25.8	47.1	pCi/L
Silver-110m	U	1.21	+/-2.92	5.53	pCi/L
Sodium-22	U	-1.84	+/-3.33	5.84	pCi/L
Thallium-208	U	0.211	+/-5.20	6.00	pCi/L
Thorium-230	U	942	+/-1020	1380	pCi/L
Thorium-234	U	27.6	+/-141	200	pCi/L
Tin-113	U	0.0739	+/-4.23	7.43	pCi/L
Uranium-235	U	24.2	+/-27.9	33.2	pCi/L
Uranium-238	U	27.6	+/-141	200	pCi/L
Yttrium-88	U	-3.6	+/-4.58	6.79	pCi/L
Zinc-65	U	2.04	+/-7.74	13.0	pCi/L
Zirconium-95	U	5.50	+/-5.91	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.42	+/-3.39	4.74	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta		10.8	+/-3.61	4.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	63.0	+/-118	202	300	pCi/L	MYM1	02/15/15	0938	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.91	+/-18.3	25.7		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	-8.67	+/-21.2	32.0		pCi/L					
Antimony-124	U	-4.26	+/-7.57	13.5		pCi/L					
Antimony-125	U	3.05	+/-9.99	15.7		pCi/L					
Barium-133	U	-0.364	+/-4.67	7.08		pCi/L					
Barium-140	U	-5.5	+/-19.5	34.9		pCi/L					
Beryllium-7	U	-10.2	+/-31.7	49.8		pCi/L					
Bismuth-212	U	40.1	+/-40.3	81.0		pCi/L					
Bismuth-214	U	12.2	+/-13.3	12.3		pCi/L					
Cerium-139	U	-0.0491	+/-3.26	5.14		pCi/L					
Cerium-141	U	1.79	+/-7.57	8.98		pCi/L					
Cerium-144	U	-21.1	+/-18.2	31.0		pCi/L					
Cesium-134	U	-0.298	+/-4.05	6.26		pCi/L					
Cesium-136	U	1.33	+/-7.10	13.6		pCi/L					
Cesium-137	U	-2.66	+/-4.68	7.04	10.0	pCi/L					
Chromium-51	U	16.2	+/-32.0	58.3		pCi/L					
Cobalt-56	U	-1.59	+/-3.68	6.31		pCi/L					
Cobalt-57	U	1.07	+/-2.62	4.53		pCi/L					
Cobalt-58	U	5.01	+/-3.06	6.22		pCi/L					
Cobalt-60	U	-0.517	+/-3.61	6.61		pCi/L					
Europium-152	U	-3.99	+/-9.97	16.9		pCi/L					
Europium-154	U	4.83	+/-9.55	17.4		pCi/L					
Europium-155	U	-1.36	+/-11.2	18.9		pCi/L					
Iridium-192	U	-1.57	+/-3.32	5.63		pCi/L					
Iron-59	U	0.625	+/-7.17	13.5		pCi/L					
Lead-210	U	-146	+/-767	1160		pCi/L					
Lead-212	U	5.43	+/-8.13	10.4		pCi/L					
Lead-214	U	5.60	+/-15.8	15.9		pCi/L					
Manganese-54	U	1.15	+/-2.90	5.50		pCi/L					
Mercury-203	U	2.84	+/-4.05	6.62		pCi/L					
Neodymium-147	U	20.0	+/-39.2	74.8		pCi/L					
Neptunium-239	U	9.82	+/-27.3	47.3		pCi/L					
Niobium-94	U	0.817	+/-3.33	6.10		pCi/L					
Niobium-95	U	0.967	+/-3.44	6.38		pCi/L					
Potassium-40		87.8	+/-67.3	58.5		pCi/L					
Promethium-144	U	-0.208	+/-3.23	5.78		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.98	+/-4.00	6.94	pCi/L
Radium-228	U	-3.91	+/-18.3	25.7	pCi/L
Ruthenium-106	U	10.3	+/-29.3	54.9	pCi/L
Silver-110m	U	-7.95	+/-4.24	4.99	pCi/L
Sodium-22	U	1.69	+/-3.36	6.10	pCi/L
Thallium-208	U	-3.21	+/-4.02	6.41	pCi/L
Thorium-230	U	798	+/-1390	2240	pCi/L
Thorium-234	U	77.8	+/-268	326	pCi/L
Tin-113	U	0.0373	+/-4.27	7.46	pCi/L
Uranium-235	U	6.23	+/-26.4	36.5	pCi/L
Uranium-238	U	77.8	+/-268	326	pCi/L
Yttrium-88	U	-1.54	+/-2.93	5.28	pCi/L
Zinc-65	U	-8.98	+/-7.42	11.9	pCi/L
Zirconium-95	U	-2.44	+/-6.25	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	17.5	+/-6.07	8.81	5.00	pCi/L	AXJ1	02/15/15	1646	1457184	2
Beta	44.1	+/-4.15	5.25	5.00	pCi/L					
Alpha	9.20	+/-4.12	6.11	5.00	pCi/L	AXJ1	02/16/15	1817	1457184	3
Beta	42.7	+/-4.65	6.46	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-8.87	+/-113	199	300	pCi/L	MYM1	02/15/15	0954	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	365772018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.16	+/-19.9	26.5		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	-9.4	+/-16.6	28.3		pCi/L					
Antimony-124	U	5.59	+/-5.05	14.8		pCi/L					
Antimony-125	U	1.16	+/-8.43	15.3		pCi/L					
Barium-133	U	3.70	+/-4.46	7.55		pCi/L					
Barium-140	U	-5.67	+/-19.2	33.4		pCi/L					
Beryllium-7	U	-11.4	+/-28.3	49.0		pCi/L					
Bismuth-212	U	16.7	+/-50.2	90.5		pCi/L					
Bismuth-214	U	12.0	+/-9.55	16.2		pCi/L					
Cerium-139	U	-1.58	+/-3.12	5.17		pCi/L					
Cerium-141	U	7.75	+/-10.7	9.88		pCi/L					
Cerium-144	U	-6.32	+/-19.8	33.4		pCi/L					
Cesium-134	U	-0.946	+/-2.97	5.42		pCi/L					
Cesium-136	U	6.41	+/-7.39	13.7		pCi/L					
Cesium-137	U	0.910	+/-3.15	5.77	10.0	pCi/L					
Chromium-51	U	-14.4	+/-32.0	56.1		pCi/L					
Cobalt-56	U	1.35	+/-3.47	6.64		pCi/L					
Cobalt-57	U	-1.81	+/-2.60	4.32		pCi/L					
Cobalt-58	U	-1.22	+/-3.02	5.44		pCi/L					
Cobalt-60	U	-0.545	+/-4.38	7.26		pCi/L					
Europium-152	U	2.22	+/-9.63	17.5		pCi/L					
Europium-154	U	-0.0812	+/-9.47	17.6		pCi/L					
Europium-155	U	0.642	+/-11.1	19.2		pCi/L					
Iridium-192	U	-0.449	+/-3.15	5.62		pCi/L					
Iron-59	U	2.10	+/-8.52	13.9		pCi/L					
Lead-210	U	8.38	+/-696	683		pCi/L					
Lead-212	U	-4.89	+/-7.23	11.5		pCi/L					
Lead-214	U	12.5	+/-13.2	16.4		pCi/L					
Manganese-54	U	-1.51	+/-3.26	5.79		pCi/L					
Mercury-203	UI	0.00	+/-5.40	6.30		pCi/L					
Neodymium-147	U	22.4	+/-57.8	71.2		pCi/L					
Neptunium-239	U	-10.2	+/-29.0	49.1		pCi/L					
Niobium-94	U	0.665	+/-3.05	5.49		pCi/L					
Niobium-95	U	-4.34	+/-3.96	5.81		pCi/L					
Potassium-40	U	25.1	+/-60.7	51.9		pCi/L					
Promethium-144	U	-1.44	+/-3.30	5.58		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	365772018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.14	+/-3.97	7.50	pCi/L
Radium-228	U	8.16	+/-19.9	26.5	pCi/L
Ruthenium-106	U	-14.1	+/-30.1	51.1	pCi/L
Silver-110m	U	-1.03	+/-3.16	5.42	pCi/L
Sodium-22	U	0.219	+/-3.30	6.20	pCi/L
Thallium-208	U	1.39	+/-4.24	7.01	pCi/L
Thorium-230	U	898	+/-1070	1950	pCi/L
Thorium-234	U	-136	+/-191	271	pCi/L
Tin-113	U	2.41	+/-4.26	7.89	pCi/L
Uranium-235	U	27.0	+/-37.2	36.4	pCi/L
Uranium-238	U	-136	+/-191	271	pCi/L
Yttrium-88	U	-0.497	+/-3.31	6.39	pCi/L
Zinc-65	U	1.13	+/-7.03	11.7	pCi/L
Zirconium-95	U	4.84	+/-6.11	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.92	+/-1.93	2.83	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta	11.0	+/-1.84	2.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-7.06	+/-115	203	300	pCi/L	MYM1	02/15/15	1011	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	365772019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:53		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.18	+/-15.2	24.6		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	12.4	+/-12.3	20.3		pCi/L					
Antimony-124	U	0.292	+/-7.49	14.8		pCi/L					
Antimony-125	U	0.987	+/-8.67	13.9		pCi/L					
Barium-133	U	4.90	+/-6.60	7.34		pCi/L					
Barium-140	U	-7.08	+/-18.9	32.5		pCi/L					
Beryllium-7	U	-1.23	+/-27.6	49.1		pCi/L					
Bismuth-212	U	15.9	+/-42.8	82.3		pCi/L					
Bismuth-214		12.0	+/-10.6	10.2		pCi/L					
Cerium-139	U	-0.812	+/-2.74	4.60		pCi/L					
Cerium-141	U	2.46	+/-5.35	9.39		pCi/L					
Cerium-144	U	-8.08	+/-18.5	30.9		pCi/L					
Cesium-134	U	-1.1	+/-3.25	5.85		pCi/L					
Cesium-136	U	1.41	+/-8.36	14.2		pCi/L					
Cesium-137	U	2.72	+/-5.56	6.17	10.0	pCi/L					
Chromium-51	U	-12.1	+/-30.1	52.7		pCi/L					
Cobalt-56	U	-2.24	+/-3.44	5.95		pCi/L					
Cobalt-57	U	-0.728	+/-2.35	3.98		pCi/L					
Cobalt-58	U	1.58	+/-2.80	5.60		pCi/L					
Cobalt-60	U	-0.771	+/-3.36	6.00		pCi/L					
Europium-152	U	3.62	+/-8.91	14.8		pCi/L					
Europium-154	U	8.34	+/-8.74	18.5		pCi/L					
Europium-155	U	-9.54	+/-9.15	14.9		pCi/L					
Iridium-192	U	-0.321	+/-3.00	5.38		pCi/L					
Iron-59	U	-5.17	+/-5.88	9.59		pCi/L					
Lead-210	U	-12.3	+/-323	495		pCi/L					
Lead-212	U	1.67	+/-8.65	10.9		pCi/L					
Lead-214	U	9.33	+/-9.56	14.9		pCi/L					
Manganese-54	U	2.91	+/-3.75	5.72		pCi/L					
Mercury-203	U	1.05	+/-3.15	5.80		pCi/L					
Neodymium-147	U	-8.74	+/-36.9	64.5		pCi/L					
Neptunium-239	U	3.80	+/-24.4	42.6		pCi/L					
Niobium-94	U	-1.89	+/-2.91	5.10		pCi/L					
Niobium-95	U	-0.946	+/-3.34	6.03		pCi/L					
Potassium-40	U	-47.5	+/-45.0	77.4		pCi/L					
Promethium-144	U	1.13	+/-3.12	5.95		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30 Project: WNUC00127  
Sample ID: 365772019 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.328	+/-3.75	6.67	pCi/L
Radium-228	U	-4.18	+/-15.2	24.6	pCi/L
Ruthenium-106	U	-12.3	+/-27.8	47.0	pCi/L
Silver-110m	U	0.0346	+/-3.30	5.12	pCi/L
Sodium-22	U	2.84	+/-3.06	6.48	pCi/L
Thallium-208	U	-2.2	+/-4.48	6.10	pCi/L
Thorium-230	U	-544	+/-1060	1520	pCi/L
Thorium-234	U	62.8	+/-166	188	pCi/L
Tin-113	U	-1.38	+/-3.86	6.74	pCi/L
Uranium-235	U	4.20	+/-22.8	33.4	pCi/L
Uranium-238	U	62.8	+/-166	188	pCi/L
Yttrium-88	U	1.17	+/-3.30	6.93	pCi/L
Zinc-65	U	-1.8	+/-6.67	11.9	pCi/L
Zirconium-95	U	-0.285	+/-5.38	10.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	20.4	+/-2.99	3.03	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta	33.4	+/-2.25	2.49	5.00	pCi/L					
Alpha	24.3	+/-3.03	2.58	5.00	pCi/L	AXJ1	02/16/15	1816	1457184	3
Beta	34.4	+/-2.05	1.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	54.4	+/-118	203	300	pCi/L	MYM1	02/15/15	1028	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.7	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 30  
Sample ID: 365772019

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	365772020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		27.5	+/-17.8	23.7		pCi/L		MJH1	01/30/15	1005 1453371	1
Americium-241	U	1.17	+/-35.2	55.2		pCi/L					
Antimony-124	U	5.51	+/-8.36	18.2		pCi/L					
Antimony-125	U	5.87	+/-9.33	17.5		pCi/L					
Barium-133	U	-2.66	+/-4.91	7.26		pCi/L					
Barium-140	U	14.9	+/-20.7	39.4		pCi/L					
Beryllium-7	U	3.76	+/-29.1	52.6		pCi/L					
Bismuth-212	U	52.4	+/-47.8	97.6		pCi/L					
Bismuth-214		28.2	+/-14.4	11.1		pCi/L					
Cerium-139	U	-0.864	+/-3.29	5.47		pCi/L					
Cerium-141	U	-0.675	+/-7.86	11.6		pCi/L					
Cerium-144	U	18.1	+/-22.2	39.6		pCi/L					
Cesium-134	U	0.156	+/-3.47	6.55		pCi/L					
Cesium-136	U	-3.65	+/-7.35	12.8		pCi/L					
Cesium-137	U	-0.50	+/-3.34	6.17	10.0	pCi/L					
Chromium-51	U	3.54	+/-34.8	62.7		pCi/L					
Cobalt-56	U	-1.0	+/-6.39	6.75		pCi/L					
Cobalt-57	U	2.79	+/-2.96	5.31		pCi/L					
Cobalt-58	U	-3.26	+/-4.41	6.31		pCi/L					
Cobalt-60	U	3.32	+/-3.61	7.66		pCi/L					
Europium-152	U	-2.77	+/-10.4	18.3		pCi/L					
Europium-154	U	-10.1	+/-10.1	15.7		pCi/L					
Europium-155	U	4.07	+/-11.7	20.5		pCi/L					
Iridium-192	U	-0.124	+/-3.49	6.23		pCi/L					
Iron-59	U	-1.07	+/-7.37	13.5		pCi/L					
Lead-210	U	-1200	+/-1620	2430		pCi/L					
Lead-212	U	-2.42	+/-8.06	12.1		pCi/L					
Lead-214		18.6	+/-13.5	13.8		pCi/L					
Manganese-54	U	2.93	+/-3.77	5.86		pCi/L					
Mercury-203	U	0.0236	+/-3.61	6.48		pCi/L					
Neodymium-147	U	29.5	+/-38.4	74.4		pCi/L					
Neptunium-239	U	4.83	+/-32.0	55.0		pCi/L					
Niobium-94	U	0.975	+/-3.14	6.00		pCi/L					
Niobium-95	U	1.16	+/-3.41	6.58		pCi/L					
Potassium-40	U	9.64	+/-69.2	71.7		pCi/L					
Promethium-144	U	-0.784	+/-3.23	5.88		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32 Project: WNUC00127  
Sample ID: 365772020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.81	+/-4.45	7.79	pCi/L
Radium-228		27.5	+/-17.8	23.7	pCi/L
Ruthenium-106	U	-32.3	+/-37.9	55.0	pCi/L
Silver-110m	U	-0.132	+/-2.98	5.58	pCi/L
Sodium-22	U	-2.86	+/-3.45	5.57	pCi/L
Thallium-208	U	2.67	+/-5.65	7.97	pCi/L
Thorium-230	U	-2070	+/-2010	3110	pCi/L
Thorium-234	U	19.3	+/-296	430	pCi/L
Tin-113	U	1.27	+/-4.55	8.28	pCi/L
Uranium-235	U	-21.5	+/-31.1	40.3	pCi/L
Uranium-238	U	19.3	+/-296	430	pCi/L
Yttrium-88	U	-0.28	+/-3.41	6.75	pCi/L
Zinc-65	U	-2.92	+/-7.80	11.6	pCi/L
Zirconium-95	U	-3.17	+/-5.60	9.88	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.98	+/-1.63	2.62	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta		229	+/-4.73	2.56	5.00	pCi/L					
Alpha		6.63	+/-2.19	2.70	5.00	pCi/L	AXJ1	02/16/15	1816	1457184	3
Beta		251	+/-4.76	1.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	351	+/-128	198	300	pCi/L	MYM1	02/15/15	1044	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 365772020

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	365772021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:26		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.9	+/-19.1	30.8		pCi/L		MJH1	01/29/15	1352 1453373	1
Americium-241	U	-10.3	+/-26.5	35.0		pCi/L					
Antimony-124	U	1.90	+/-9.91	19.3		pCi/L					
Antimony-125	U	3.69	+/-10.9	19.6		pCi/L					
Barium-133	U	-2.75	+/-5.90	8.53		pCi/L					
Barium-140	U	-20	+/-22.0	37.1		pCi/L					
Beryllium-7	U	17.9	+/-36.6	66.0		pCi/L					
Bismuth-212	U	-4.84	+/-56.6	101		pCi/L					
Bismuth-214		17.6	+/-14.0	13.2		pCi/L					
Cerium-139	U	1.16	+/-3.54	6.19		pCi/L					
Cerium-141	U	0.588	+/-12.0	12.0		pCi/L					
Cerium-144	U	-1.05	+/-41.6	41.4		pCi/L					
Cesium-134	U	-3.94	+/-3.96	6.38		pCi/L					
Cesium-136	U	4.51	+/-6.70	14.5		pCi/L					
Cesium-137	U	-2.13	+/-3.95	6.80	10.0	pCi/L					
Chromium-51	U	-20.7	+/-38.0	65.1		pCi/L					
Cobalt-56	U	-0.119	+/-6.37	8.41		pCi/L					
Cobalt-57	U	-3.96	+/-3.78	5.32		pCi/L					
Cobalt-58	U	-1.48	+/-4.25	7.35		pCi/L					
Cobalt-60	U	-0.101	+/-4.05	7.45		pCi/L					
Europium-152	U	-7.87	+/-12.0	19.7		pCi/L					
Europium-154	U	7.22	+/-12.6	23.9		pCi/L					
Europium-155	U	5.92	+/-12.4	22.2		pCi/L					
Iridium-192	U	1.64	+/-3.98	7.18		pCi/L					
Iron-59	U	2.23	+/-8.17	15.5		pCi/L					
Lead-210	U	49.0	+/-646	1020		pCi/L					
Lead-212	U	2.21	+/-8.80	13.1		pCi/L					
Lead-214	UI	0.00	+/-13.0	19.3		pCi/L					
Manganese-54	U	2.39	+/-4.97	7.97		pCi/L					
Mercury-203	U	0.787	+/-4.22	7.54		pCi/L					
Neodymium-147	U	11.1	+/-43.1	79.6		pCi/L					
Neptunium-239	U	28.7	+/-34.0	61.4		pCi/L					
Niobium-94	U	0.672	+/-3.59	6.55		pCi/L					
Niobium-95	U	-1.9	+/-4.03	6.92		pCi/L					
Potassium-40	U	8.28	+/-62.3	82.7		pCi/L					
Promethium-144	U	-0.958	+/-4.79	7.20		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 33  
Sample ID: 365772021  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.55	+/-5.05	9.39	pCi/L
Radium-228	U	17.9	+/-19.1	30.8	pCi/L
Ruthenium-106	U	27.7	+/-36.1	68.8	pCi/L
Silver-110m	U	0.172	+/-3.61	6.55	pCi/L
Sodium-22	U	2.21	+/-4.49	8.42	pCi/L
Thallium-208	U	-0.838	+/-5.56	7.88	pCi/L
Thorium-230	U	-1210	+/-1660	2450	pCi/L
Thorium-234	U	14.0	+/-269	302	pCi/L
Tin-113	U	0.754	+/-6.73	9.48	pCi/L
Uranium-235	U	-13	+/-45.3	43.2	pCi/L
Uranium-238	U	14.0	+/-269	302	pCi/L
Yttrium-88	U	-3.21	+/-4.79	8.09	pCi/L
Zinc-65	U	-10.3	+/-9.59	15.6	pCi/L
Zirconium-95	U	-1.03	+/-7.75	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.86	+/-2.45	4.15	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta	U	2.83	+/-2.54	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	95.3	+/-115	194	300	pCi/L	MYM1	02/15/15	1101	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365772022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.39	+/-16.3	24.3		pCi/L		MJH1	01/30/15	1431 1453373	1
Americium-241	U	-6.47	+/-14.4	22.0		pCi/L					
Antimony-124	U	3.51	+/-6.66	14.5		pCi/L					
Antimony-125	U	-0.633	+/-7.40	13.2		pCi/L					
Barium-133	U	2.69	+/-3.93	6.67		pCi/L					
Barium-140	U	2.71	+/-18.9	34.2		pCi/L					
Beryllium-7	U	-0.196	+/-26.5	47.5		pCi/L					
Bismuth-212	U	29.0	+/-36.9	75.2		pCi/L					
Bismuth-214		10.8	+/-9.48	10.6		pCi/L					
Cerium-139	U	-1.11	+/-2.63	4.37		pCi/L					
Cerium-141	U	-3.7	+/-5.32	8.75		pCi/L					
Cerium-144	U	-6.72	+/-16.6	28.0		pCi/L					
Cesium-134	U	0.987	+/-3.49	6.65		pCi/L					
Cesium-136	U	-1.82	+/-8.54	13.8		pCi/L					
Cesium-137	U	2.50	+/-4.83	4.98	10.0	pCi/L					
Chromium-51	U	-8.7	+/-30.8	54.4		pCi/L					
Cobalt-56	U	-1.47	+/-3.47	5.24		pCi/L					
Cobalt-57	U	0.436	+/-2.32	4.05		pCi/L					
Cobalt-58	U	-0.539	+/-2.94	5.42		pCi/L					
Cobalt-60	U	-0.617	+/-3.20	5.78		pCi/L					
Europium-152	U	-0.93	+/-8.77	15.6		pCi/L					
Europium-154	U	3.12	+/-9.65	18.6		pCi/L					
Europium-155	U	1.77	+/-8.97	15.8		pCi/L					
Iridium-192	U	0.0594	+/-3.21	5.38		pCi/L					
Iron-59	U	2.82	+/-6.63	12.9		pCi/L					
Lead-210	U	134	+/-310	485		pCi/L					
Lead-212	U	2.37	+/-7.83	9.19		pCi/L					
Lead-214	U	5.82	+/-11.0	12.0		pCi/L					
Manganese-54	U	0.367	+/-3.86	5.97		pCi/L					
Mercury-203	U	0.617	+/-3.19	5.82		pCi/L					
Neodymium-147	U	-53.8	+/-40.4	62.6		pCi/L					
Neptunium-239	U	-0.848	+/-23.1	40.0		pCi/L					
Niobium-94	U	-1.34	+/-3.01	4.60		pCi/L					
Niobium-95	U	1.37	+/-3.27	6.31		pCi/L					
Potassium-40	U	-39.5	+/-48.0	84.4		pCi/L					
Promethium-144	U	-0.219	+/-3.34	5.36		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365772022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.58	+/-3.73	7.05	pCi/L
Radium-228	U	-5.39	+/-16.3	24.3	pCi/L
Ruthenium-106	U	23.4	+/-25.9	50.5	pCi/L
Silver-110m	U	2.13	+/-4.28	5.41	pCi/L
Sodium-22	U	1.20	+/-3.42	6.61	pCi/L
Thallium-208	U	-3.5	+/-4.51	5.97	pCi/L
Thorium-230	U	933	+/-1170	1570	pCi/L
Thorium-234	U	51.4	+/-104	222	pCi/L
Tin-113	U	-0.255	+/-3.77	6.74	pCi/L
Uranium-235	U	-1.13	+/-21.2	33.3	pCi/L
Uranium-238	U	51.4	+/-104	222	pCi/L
Yttrium-88	U	-0.373	+/-2.96	5.80	pCi/L
Zinc-65	U	-4.29	+/-6.60	11.2	pCi/L
Zirconium-95	U	7.45	+/-8.75	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.504	+/-1.70	3.52	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta	U	4.52	+/-3.01	4.70	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	89.8	+/-116	195	300	pCi/L	MYM1	02/15/15	1117	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365772023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:44		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-21.3	32.0		pCi/L		MJH1	01/30/15	1431 1453373	1
Americium-241	U	13.0	+/-33.7	54.4		pCi/L					
Antimony-124	U	-5.82	+/-6.92	11.5		pCi/L					
Antimony-125	U	3.66	+/-9.58	17.6		pCi/L					
Barium-133	U	-1.48	+/-5.08	7.72		pCi/L					
Barium-140	U	5.36	+/-25.9	40.8		pCi/L					
Beryllium-7	UI	0.00	+/-63.5	53.4		pCi/L					
Bismuth-212	U	-6.04	+/-39.6	73.7		pCi/L					
Bismuth-214		16.3	+/-13.0	13.3		pCi/L					
Cerium-139	U	0.513	+/-3.24	5.53		pCi/L					
Cerium-141	U	-1.67	+/-7.70	11.2		pCi/L					
Cerium-144	U	-6.75	+/-23.3	38.9		pCi/L					
Cesium-134	U	1.92	+/-3.53	6.99		pCi/L					
Cesium-136	U	1.29	+/-6.70	12.9		pCi/L					
Cesium-137	U	1.57	+/-4.11	6.99	10.0	pCi/L					
Chromium-51	U	-21.8	+/-35.5	60.9		pCi/L					
Cobalt-56	U	-1.18	+/-6.34	6.64		pCi/L					
Cobalt-57	U	0.906	+/-2.91	5.05		pCi/L					
Cobalt-58	U	-0.448	+/-3.46	6.37		pCi/L					
Cobalt-60	U	0.384	+/-3.35	6.45		pCi/L					
Europium-152	U	-3.57	+/-10.5	18.3		pCi/L					
Europium-154	U	6.99	+/-9.79	20.3		pCi/L					
Europium-155	U	-4.71	+/-12.9	21.7		pCi/L					
Iridium-192	U	0.252	+/-3.53	6.35		pCi/L					
Iron-59	U	-1.31	+/-7.10	12.9		pCi/L					
Lead-210	U	65.5	+/-1530	2390		pCi/L					
Lead-212	U	3.19	+/-8.45	12.2		pCi/L					
Lead-214	UI	0.00	+/-15.0	12.9		pCi/L					
Manganese-54	U	0.161	+/-3.71	6.05		pCi/L					
Mercury-203	U	0.351	+/-3.76	6.78		pCi/L					
Neodymium-147	U	-46	+/-41.7	65.8		pCi/L					
Neptunium-239	U	28.5	+/-30.1	54.3		pCi/L					
Niobium-94	U	-0.864	+/-3.07	5.57		pCi/L					
Niobium-95	U	-0.0935	+/-3.80	7.02		pCi/L					
Potassium-40	U	-31.6	+/-52.2	90.0		pCi/L					
Promethium-144	U	-1.1	+/-3.36	6.05		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365772023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.44	+/-5.35	8.21	pCi/L
Radium-228	UI	0.00	+/-21.3	32.0	pCi/L
Ruthenium-106	U	4.65	+/-32.4	57.9	pCi/L
Silver-110m	U	-0.375	+/-3.42	5.52	pCi/L
Sodium-22	U	2.97	+/-3.31	7.09	pCi/L
Thallium-208	U	4.91	+/-7.61	5.61	pCi/L
Thorium-230	U	-1090	+/-2030	2900	pCi/L
Thorium-234	U	210	+/-350	381	pCi/L
Tin-113	U	-0.683	+/-4.22	7.45	pCi/L
Uranium-235	U	-17	+/-29.7	38.5	pCi/L
Uranium-238	U	210	+/-350	381	pCi/L
Yttrium-88	U	-2.33	+/-3.85	5.33	pCi/L
Zinc-65	U	3.72	+/-7.96	14.5	pCi/L
Zirconium-95	U	4.82	+/-6.29	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	3.67	+/-2.13	3.30	5.00	pCi/L	AXJ1	02/15/15	1646	1457184	2
Beta	28.1	+/-2.24	2.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	45.5	+/-117	201	300	pCi/L	MYM1	02/15/15	1134	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 41R	Project:	WNUC00127
Sample ID:	365772024	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:52		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.6	+/-25.7	23.9		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	21.9	+/-30.6	53.4		pCi/L					
Antimony-124	U	3.55	+/-10.7	22.5		pCi/L					
Antimony-125	U	-3.57	+/-11.4	19.6		pCi/L					
Barium-133	U	2.25	+/-5.26	8.67		pCi/L					
Barium-140	U	-12.1	+/-33.4	60.2		pCi/L					
Beryllium-7	U	0.405	+/-38.2	59.7		pCi/L					
Bismuth-212	U	6.03	+/-56.1	104		pCi/L					
Bismuth-214	U	5.99	+/-9.51	14.8		pCi/L					
Cerium-139	U	-1.34	+/-3.19	5.37		pCi/L					
Cerium-141	U	-3.64	+/-8.06	12.0		pCi/L					
Cerium-144	U	0.747	+/-21.1	37.0		pCi/L					
Cesium-134	U	-3.96	+/-5.61	7.76		pCi/L					
Cesium-136	U	-0.153	+/-14.2	26.6		pCi/L					
Cesium-137	U	-1.05	+/-3.86	6.93	10.0	pCi/L					
Chromium-51	U	13.4	+/-50.0	81.5		pCi/L					
Cobalt-56	U	-2.53	+/-4.44	7.51		pCi/L					
Cobalt-57	U	-0.275	+/-2.84	4.97		pCi/L					
Cobalt-58	U	6.99	+/-13.0	7.27		pCi/L					
Cobalt-60	U	-5.98	+/-8.21	7.62		pCi/L					
Europium-152	U	-3.73	+/-10.9	19.1		pCi/L					
Europium-154	U	7.29	+/-11.3	23.7		pCi/L					
Europium-155	U	5.69	+/-11.6	21.2		pCi/L					
Iridium-192	U	1.95	+/-4.82	7.37		pCi/L					
Iron-59	U	-9.84	+/-10.1	16.5		pCi/L					
Lead-210	U	1290	+/-1600	2260		pCi/L					
Lead-212	U	8.70	+/-13.3	11.5		pCi/L					
Lead-214	U	7.19	+/-13.8	15.3		pCi/L					
Manganese-54	U	-2.99	+/-4.12	6.81		pCi/L					
Mercury-203	U	-0.118	+/-4.28	7.74		pCi/L					
Neodymium-147	U	11.6	+/-73.0	138		pCi/L					
Neptunium-239	U	15.2	+/-29.8	54.2		pCi/L					
Niobium-94	U	-0.109	+/-3.65	6.66		pCi/L					
Niobium-95	U	-1.57	+/-4.49	6.86		pCi/L					
Potassium-40	U	25.2	+/-66.5	83.2		pCi/L					
Promethium-144	U	0.596	+/-3.78	7.05		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 365772024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.15	+/-6.39	9.40	pCi/L
Radium-228	U	17.6	+/-25.7	23.9	pCi/L
Ruthenium-106	U	16.3	+/-36.2	69.6	pCi/L
Silver-110m	U	-0.321	+/-3.50	6.43	pCi/L
Sodium-22	U	2.60	+/-3.98	8.37	pCi/L
Thallium-208	U	0.132	+/-5.77	8.63	pCi/L
Thorium-230	U	-1680	+/-1940	2770	pCi/L
Thorium-234	U	371	+/-478	437	pCi/L
Tin-113	U	2.69	+/-5.08	9.50	pCi/L
Uranium-235	U	4.52	+/-22.3	36.2	pCi/L
Uranium-238	U	371	+/-478	437	pCi/L
Yttrium-88	U	1.92	+/-4.89	10.4	pCi/L
Zinc-65	U	0.734	+/-7.49	14.6	pCi/L
Zirconium-95	U	3.11	+/-7.69	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.02	+/-3.30	4.65	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta		22.0	+/-4.45	4.31	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	33.9	+/-115	199	300	pCi/L	MYM1	02/15/15	1150	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365772025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:07		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.83	+/-18.7	31.5		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	-29.9	+/-25.9	43.5		pCi/L					
Antimony-124	U	1.76	+/-10.3	17.9		pCi/L					
Antimony-125	U	-0.665	+/-10.2	18.1		pCi/L					
Barium-133	U	0.824	+/-5.35	8.52		pCi/L					
Barium-140	U	1.81	+/-22.5	40.1		pCi/L					
Beryllium-7	U	12.3	+/-29.5	55.1		pCi/L					
Bismuth-212	U	30.7	+/-50.8	99.7		pCi/L					
Bismuth-214		27.3	+/-17.2	14.4		pCi/L					
Cerium-139	U	0.526	+/-3.35	5.78		pCi/L					
Cerium-141	U	0.268	+/-7.38	11.4		pCi/L					
Cerium-144	U	-11	+/-22.6	38.0		pCi/L					
Cesium-134	U	-0.681	+/-4.21	7.61		pCi/L					
Cesium-136	U	8.86	+/-9.01	18.7		pCi/L					
Cesium-137	U	2.80	+/-3.98	7.83	10.0	pCi/L					
Chromium-51	U	11.8	+/-35.2	64.9		pCi/L					
Cobalt-56	U	-2.03	+/-3.96	6.83		pCi/L					
Cobalt-57	U	-1.69	+/-3.07	5.17		pCi/L					
Cobalt-58	U	0.0119	+/-3.88	7.15		pCi/L					
Cobalt-60	U	0.743	+/-4.43	6.98		pCi/L					
Europium-152	U	4.55	+/-10.6	19.7		pCi/L					
Europium-154	U	11.3	+/-16.1	24.9		pCi/L					
Europium-155	U	-2.24	+/-12.4	21.5		pCi/L					
Iridium-192	U	-3.32	+/-3.73	6.27		pCi/L					
Iron-59	U	-2.3	+/-8.41	15.5		pCi/L					
Lead-210	U	506	+/-1400	2380		pCi/L					
Lead-212	U	5.36	+/-8.79	11.0		pCi/L					
Lead-214		33.3	+/-16.0	21.1		pCi/L					
Manganese-54	U	0.912	+/-3.96	7.41		pCi/L					
Mercury-203	U	-1.86	+/-3.78	6.60		pCi/L					
Neodymium-147	U	-5.22	+/-45.0	78.8		pCi/L					
Neptunium-239	U	-39.3	+/-35.4	53.9		pCi/L					
Niobium-94	U	-0.334	+/-4.04	7.31		pCi/L					
Niobium-95	U	-0.0117	+/-3.96	7.28		pCi/L					
Potassium-40	U	11.7	+/-53.6	102		pCi/L					
Promethium-144	U	0.366	+/-3.86	7.14		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365772025	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.72	+/-4.72	8.11	pCi/L
Radium-228	U	-4.83	+/-18.7	31.5	pCi/L
Ruthenium-106	U	28.0	+/-34.3	67.9	pCi/L
Silver-110m	U	-2.08	+/-3.54	6.18	pCi/L
Sodium-22	U	3.99	+/-5.68	8.91	pCi/L
Thallium-208	U	0.545	+/-5.12	8.61	pCi/L
Thorium-230	U	-430	+/-1630	2870	pCi/L
Thorium-234	U	14.7	+/-267	417	pCi/L
Tin-113	U	1.99	+/-4.65	8.60	pCi/L
Uranium-235	U	15.9	+/-26.5	38.3	pCi/L
Uranium-238	U	14.7	+/-267	417	pCi/L
Yttrium-88	U	-1.35	+/-4.48	8.42	pCi/L
Zinc-65	U	-3.63	+/-9.19	14.0	pCi/L
Zirconium-95	U	-0.0475	+/-6.76	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.18	+/-1.47	4.23	5.00	pCi/L	AXJ1	02/16/15	0849	1457184	2
Beta		4.36	+/-2.73	4.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	71.9	+/-115	195	300	pCi/L	MYM1	02/15/15	1207	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	365772026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:54		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.2	+/-13.6	29.2		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	-11.4	+/-30.5	47.8		pCi/L					
Antimony-124	U	-5.92	+/-9.52	16.5		pCi/L					
Antimony-125	U	-5.59	+/-11.5	16.8		pCi/L					
Barium-133	U	4.07	+/-5.44	6.98		pCi/L					
Barium-140	U	-8.29	+/-18.8	32.0		pCi/L					
Beryllium-7	U	18.1	+/-30.8	58.2		pCi/L					
Bismuth-212	U	-38.4	+/-63.2	93.6		pCi/L					
Bismuth-214	U	7.89	+/-14.4	13.1		pCi/L					
Cerium-139	U	-1.43	+/-3.25	5.37		pCi/L					
Cerium-141	U	-4.62	+/-6.35	10.4		pCi/L					
Cerium-144	U	8.47	+/-22.4	39.2		pCi/L					
Cesium-134	U	-1.25	+/-3.71	6.28		pCi/L					
Cesium-136	U	-5.32	+/-9.56	15.4		pCi/L					
Cesium-137	U	-0.266	+/-3.65	6.78	10.0	pCi/L					
Chromium-51	U	-2.78	+/-32.8	58.8		pCi/L					
Cobalt-56	U	4.30	+/-3.83	7.96		pCi/L					
Cobalt-57	U	1.19	+/-2.78	4.92		pCi/L					
Cobalt-58	U	-1.26	+/-4.54	6.99		pCi/L					
Cobalt-60	U	4.84	+/-4.15	9.15		pCi/L					
Europium-152	U	7.92	+/-10.6	19.4		pCi/L					
Europium-154	U	-3.02	+/-10.3	19.3		pCi/L					
Europium-155	U	2.55	+/-12.5	21.8		pCi/L					
Iridium-192	U	-0.869	+/-3.45	6.10		pCi/L					
Iron-59	U	2.28	+/-6.47	13.0		pCi/L					
Lead-210	U	875	+/-1440	1810		pCi/L					
Lead-212	U	1.49	+/-6.23	11.3		pCi/L					
Lead-214	UI	0.00	+/-10.4	16.8		pCi/L					
Manganese-54	U	0.738	+/-4.00	7.49		pCi/L					
Mercury-203	U	0.984	+/-3.64	6.69		pCi/L					
Neodymium-147	U	17.9	+/-38.2	72.3		pCi/L					
Neptunium-239	U	15.3	+/-35.1	52.9		pCi/L					
Niobium-94	U	-0.768	+/-3.62	5.70		pCi/L					
Niobium-95	U	-1.45	+/-3.74	6.67		pCi/L					
Potassium-40	U	-17.6	+/-58.8	102		pCi/L					
Promethium-144	U	-1.47	+/-3.25	5.78		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 365772026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	UI	0.00	+/-13.6	8.39	pCi/L
Radium-228	U	18.2	+/-13.6	29.2	pCi/L
Ruthenium-106	U	7.88	+/-32.5	62.0	pCi/L
Silver-110m	U	-0.883	+/-3.25	5.93	pCi/L
Sodium-22	U	-0.996	+/-3.63	6.82	pCi/L
Thallium-208	U	5.63	+/-8.65	6.41	pCi/L
Thorium-230	U	-681	+/-2020	2970	pCi/L
Thorium-234	U	-289	+/-257	402	pCi/L
Tin-113	U	-1.19	+/-4.44	7.78	pCi/L
Uranium-235	U	-23.8	+/-25.5	37.3	pCi/L
Uranium-238	U	-289	+/-257	402	pCi/L
Yttrium-88	U	1.81	+/-3.24	7.46	pCi/L
Zinc-65	U	-4.76	+/-9.17	13.0	pCi/L
Zirconium-95	U	4.65	+/-7.85	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.659	+/-1.81	3.50	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta	U	2.47	+/-2.98	4.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	88.3	+/-114	192	300	pCi/L	MYM1	02/15/15	1224	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365772027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 09:43		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.74	+/-18.8	29.1		pCi/L		MJH1	02/02/15	0921 1453373	1
Americium-241	U	-15.8	+/-19.8	34.2		pCi/L					
Antimony-124	U	-4.94	+/-9.13	16.3		pCi/L					
Antimony-125	U	7.00	+/-11.2	20.9		pCi/L					
Barium-133	U	6.07	+/-7.24	9.86		pCi/L					
Barium-140	U	-6.1	+/-27.4	48.1		pCi/L					
Beryllium-7	U	3.30	+/-37.1	66.7		pCi/L					
Bismuth-212	U	-3.59	+/-63.8	112		pCi/L					
Bismuth-214		23.3	+/-15.1	14.2		pCi/L					
Cerium-139	U	-0.731	+/-3.62	6.23		pCi/L					
Cerium-141	U	-12.7	+/-9.03	12.0		pCi/L					
Cerium-144	U	-2.49	+/-24.2	42.1		pCi/L					
Cesium-134	U	2.42	+/-4.44	8.57		pCi/L					
Cesium-136	U	-3.9	+/-11.9	17.8		pCi/L					
Cesium-137	U	0.233	+/-4.78	8.46	10.0	pCi/L					
Chromium-51	U	18.5	+/-42.7	78.5		pCi/L					
Cobalt-56	U	-0.253	+/-4.76	8.69		pCi/L					
Cobalt-57	U	0.840	+/-3.14	5.56		pCi/L					
Cobalt-58	U	-2.47	+/-4.66	7.59		pCi/L					
Cobalt-60	U	-3.68	+/-4.32	7.06		pCi/L					
Europium-152	U	7.70	+/-12.7	22.3		pCi/L					
Europium-154	U	4.84	+/-14.9	22.1		pCi/L					
Europium-155	U	-1.21	+/-12.9	22.6		pCi/L					
Iridium-192	U	-0.215	+/-4.25	7.63		pCi/L					
Iron-59	U	3.31	+/-7.92	15.4		pCi/L					
Lead-210	U	-544	+/-566	858		pCi/L					
Lead-212	UI	0.00	+/-16.8	14.6		pCi/L					
Lead-214	U	18.1	+/-16.5	20.3		pCi/L					
Manganese-54	U	2.26	+/-4.25	8.13		pCi/L					
Mercury-203	U	0.392	+/-4.86	8.32		pCi/L					
Neodymium-147	U	11.0	+/-57.3	103		pCi/L					
Neptunium-239	U	-18.4	+/-33.2	56.9		pCi/L					
Niobium-94	U	-1.67	+/-3.92	6.68		pCi/L					
Niobium-95	U	1.85	+/-4.64	8.45		pCi/L					
Potassium-40		71.0	+/-52.2	67.0		pCi/L					
Promethium-144	U	-0.569	+/-4.21	7.34		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47  
Sample ID: 365772027  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.39	+/-5.26	9.01	pCi/L
Radium-228	U	-9.74	+/-18.8	29.1	pCi/L
Ruthenium-106	U	33.5	+/-38.9	66.4	pCi/L
Silver-110m	U	0.456	+/-4.33	7.71	pCi/L
Sodium-22	U	1.71	+/-5.24	7.12	pCi/L
Thallium-208	U	3.20	+/-6.51	7.31	pCi/L
Thorium-230	U	-1150	+/-1330	2290	pCi/L
Thorium-234	U	-312	+/-233	315	pCi/L
Tin-113	U	-1.45	+/-6.07	9.28	pCi/L
Uranium-235	U	-19	+/-31.4	41.9	pCi/L
Uranium-238	U	-312	+/-233	315	pCi/L
Yttrium-88	U	2.83	+/-4.52	9.48	pCi/L
Zinc-65	U	2.43	+/-8.43	14.2	pCi/L
Zirconium-95	U	-1.75	+/-8.19	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.672	+/-2.09	4.28	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta		76.0	+/-7.25	3.54	5.00	pCi/L					
Alpha	U	-0.541	+/-1.48	2.71	5.00	pCi/L	AXJ1	02/16/15	1818	1457184	3
Beta		90.2	+/-2.99	1.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	153	+/-120	198	300	pCi/L	MYM1	02/15/15	1240	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365772027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	365772028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 09:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.7	+/-19.1	34.6		pCi/L		MJH1	02/02/15	0948 1453373	1
Americium-241	U	-16.5	+/-24.6	37.0		pCi/L					
Antimony-124	U	-11.3	+/-12.2	20.1		pCi/L					
Antimony-125	U	-4.48	+/-11.3	19.0		pCi/L					
Barium-133	U	-1.03	+/-6.04	9.10		pCi/L					
Barium-140	U	-15	+/-38.1	67.9		pCi/L					
Beryllium-7	U	-7.84	+/-37.8	68.8		pCi/L					
Bismuth-212	U	-2.27	+/-57.7	104		pCi/L					
Bismuth-214	U	12.0	+/-14.4	20.1		pCi/L					
Cerium-139	U	1.30	+/-3.74	6.84		pCi/L					
Cerium-141	U	1.10	+/-9.54	15.4		pCi/L					
Cerium-144	U	6.31	+/-26.0	44.6		pCi/L					
Cesium-134	U	3.27	+/-4.93	9.10		pCi/L					
Cesium-136	U	-5.33	+/-14.1	25.5		pCi/L					
Cesium-137	U	-2.25	+/-4.33	7.48	10.0	pCi/L					
Chromium-51	U	28.4	+/-53.7	98.0		pCi/L					
Cobalt-56	U	-0.313	+/-4.71	8.47		pCi/L					
Cobalt-57	U	-2.76	+/-3.34	5.43		pCi/L					
Cobalt-58	UI	0.00	+/-16.8	6.91		pCi/L					
Cobalt-60	U	2.31	+/-4.39	8.89		pCi/L					
Europium-152	U	-3.04	+/-12.4	21.4		pCi/L					
Europium-154	U	2.95	+/-13.9	26.5		pCi/L					
Europium-155	U	2.28	+/-12.7	22.0		pCi/L					
Iridium-192	U	-4.59	+/-4.83	7.96		pCi/L					
Iron-59	U	10.3	+/-11.8	21.7		pCi/L					
Lead-210	U	-300	+/-757	1170		pCi/L					
Lead-212	U	-5.28	+/-9.66	14.7		pCi/L					
Lead-214	U	17.2	+/-16.9	18.2		pCi/L					
Manganese-54	U	-1.3	+/-4.47	7.78		pCi/L					
Mercury-203	U	1.38	+/-5.23	9.40		pCi/L					
Neodymium-147	U	12.1	+/-85.4	160		pCi/L					
Neptunium-239	U	-6.09	+/-33.2	56.1		pCi/L					
Niobium-94	U	-0.664	+/-4.10	7.30		pCi/L					
Niobium-95	U	2.48	+/-4.30	8.40		pCi/L					
Potassium-40	U	0.792	+/-51.3	94.7		pCi/L					
Promethium-144	U	1.17	+/-3.81	7.16		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 365772028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.885	+/-4.93	8.97	pCi/L
Radium-228	U	-2.7	+/-19.1	34.6	pCi/L
Ruthenium-106	U	1.11	+/-41.0	68.1	pCi/L
Silver-110m	U	0.464	+/-4.02	7.41	pCi/L
Sodium-22	U	1.12	+/-4.92	9.41	pCi/L
Thallium-208	UI	0.00	+/-6.05	7.31	pCi/L
Thorium-230	U	-438	+/-1520	2490	pCi/L
Thorium-234	U	147	+/-277	300	pCi/L
Tin-113	U	4.92	+/-5.47	10.3	pCi/L
Uranium-235	U	-30	+/-32.5	41.1	pCi/L
Uranium-238	U	147	+/-277	300	pCi/L
Yttrium-88	U	-0.552	+/-4.28	8.42	pCi/L
Zinc-65	U	5.03	+/-9.65	19.1	pCi/L
Zirconium-95	U	1.30	+/-8.31	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.64	+/-2.33	4.06	5.00	pCi/L	AXJ1	02/16/15	0849	1457184	2
Beta		7.15	+/-2.78	3.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	62.3	+/-118	201	300	pCi/L	MYM1	02/15/15	1257	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## QC Summary

Report Date: February 17, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 365772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453371										
QC1203252726 365772001 DUP											
Actinium-228	U	6.01	UI	0.00	pCi/L	N/A			N/A	MJH1	01/30/15 09:54
	Uncertainty	+/-14.1		+/-15.5							
Americium-241	U	-10.8	U	-8.52	pCi/L	N/A			N/A		
	Uncertainty	+/-30.3		+/-27.9							
Antimony-124	U	2.00	U	4.22	pCi/L	N/A			N/A		
	Uncertainty	+/-9.37		+/-11.8							
Antimony-125	U	-2.08	U	-3.34	pCi/L	N/A			N/A		
	Uncertainty	+/-8.54		+/-10.2							
Barium-133	U	0.623	U	-2.06	pCi/L	N/A			N/A		
	Uncertainty	+/-6.11		+/-5.41							
Barium-140	U	7.03	U	8.84	pCi/L	N/A			N/A		
	Uncertainty	+/-30.0		+/-34.9							
Beryllium-7	U	-8.47	U	8.47	pCi/L	N/A			N/A		
	Uncertainty	+/-37.0		+/-37.5							
Bismuth-212	U	-17.7	U	33.7	pCi/L	N/A			N/A		
	Uncertainty	+/-57.9		+/-56.9							
Bismuth-214	U	9.84	UI	0.00	pCi/L	N/A			N/A		
	Uncertainty	+/-11.1		+/-18.1							
Cerium-139	U	-0.381	U	-3.72	pCi/L	N/A			N/A		
	Uncertainty	+/-3.86		+/-3.38							
Cerium-141	U	0.731	U	-3.78	pCi/L	N/A			N/A		
	Uncertainty	+/-8.79		+/-6.90							
Cerium-144	U	-8.79	U	-7.19	pCi/L	N/A			N/A		
	Uncertainty	+/-21.6		+/-21.5							
Cesium-134	U	-0.973	U	0.899	pCi/L	N/A			N/A		
	Uncertainty	+/-3.65		+/-3.78							
Cesium-136	U	-5.57	U	-6.77	pCi/L	N/A			N/A		
	Uncertainty	+/-12.0		+/-11.1							
Cesium-137	U	-2.77	U	0.227	pCi/L	N/A			N/A		
	Uncertainty	+/-3.40		+/-3.84							
Chromium-51	U	2.39	U	-58.5	pCi/L	N/A			N/A		
	Uncertainty	+/-45.1		+/-45.9							
Cobalt-56	U	1.39	U	-0.22	pCi/L	N/A			N/A		
	Uncertainty	+/-4.01		+/-4.71							
Cobalt-57	U	0.0838	U	3.18	pCi/L	N/A			N/A		
	Uncertainty	+/-2.89		+/-3.01							
Cobalt-58	U	-0.687	U	-0.951	pCi/L	N/A			N/A		
	Uncertainty	+/-3.48		+/-5.08							
Cobalt-60	U	5.59	U	-7.33	pCi/L	N/A			N/A		
	Uncertainty	+/-3.40		+/-9.15							

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Europium-152	U	-2.22	U	-3.77	pCi/L	N/A		N/A	MJH1	01/30/15	09:54
	Uncertainty	+/-10.7		+/-10.3							
Europium-154	U	4.59	U	-9.5	pCi/L	N/A		N/A			
	Uncertainty	+/-9.84		+/-10.2							
Europium-155	U	-1.31	U	0.360	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-10.8							
Iridium-192	U	-0.426	U	6.75	pCi/L	N/A		N/A			
	Uncertainty	+/-3.77		+/-4.04							
Iron-59	U	2.73	U	0.664	pCi/L	N/A		N/A			
	Uncertainty	+/-7.99		+/-10.7							
Lead-210	U	431	U	672	pCi/L	N/A		N/A			
	Uncertainty	+/-1290		+/-1210							
Lead-212	U	1.09	U	1.41	pCi/L	N/A		N/A			
	Uncertainty	+/-7.70		+/-10.5							
Lead-214	U	10.8	U	16.2	pCi/L	N/A		N/A			
	Uncertainty	+/-13.2		+/-14.7							
Manganese-54	U	1.02	U	0.528	pCi/L	N/A		N/A			
	Uncertainty	+/-3.60		+/-4.13							
Mercury-203	U	4.20	U	-1.75	pCi/L	N/A		N/A			
	Uncertainty	+/-4.16		+/-4.29							
Neodymium-147	U	-33.8	U	-34.7	pCi/L	N/A		N/A			
	Uncertainty	+/-66.0		+/-86.1							
Neptunium-239	U	-16.3	U	0.114	pCi/L	N/A		N/A			
	Uncertainty	+/-28.8		+/-27.6							
Niobium-94	U	-2.35	U	-0.205	pCi/L	N/A		N/A			
	Uncertainty	+/-4.01		+/-3.88							
Niobium-95	U	2.14	U	2.34	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-5.31							
Potassium-40	U	-40.6	U	-28.5	pCi/L	N/A		N/A			
	Uncertainty	+/-56.2		+/-68.8							
Promethium-144	U	4.17	U	1.90	pCi/L	N/A		N/A			
	Uncertainty	+/-4.33		+/-4.34							
Promethium-146	U	0.251	U	3.49	pCi/L	N/A		N/A			
	Uncertainty	+/-4.76		+/-4.86							
Radium-228	U	6.01	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-15.5							
Ruthenium-106	U	1.04	U	-8.6	pCi/L	N/A		N/A			
	Uncertainty	+/-30.0		+/-33.0							
Silver-110m	U	2.43	U	-2.8	pCi/L	N/A		N/A			
	Uncertainty	+/-3.18		+/-3.63							
Sodium-22	U	1.82	U	-3.32	pCi/L	N/A		N/A			
	Uncertainty	+/-3.51		+/-3.61							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Thallium-208	U	2.65	U	-0.297	pCi/L	N/A		N/A			
	Uncertainty	+/-6.45		+/-5.82							
Thorium-230	U	770	U	-198	pCi/L	N/A		N/A	MJH1	01/30/15	09:54
	Uncertainty	+/-2010		+/-1810							
Thorium-234	U	-306	U	-55.2	pCi/L	N/A		N/A			
	Uncertainty	+/-252		+/-289							
Tin-113	U	4.31	U	-2.21	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-5.37							
Uranium-235	U	12.8	U	1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-31.3		+/-25.2							
Uranium-238	U	-306	U	-55.2	pCi/L	N/A		N/A			
	Uncertainty	+/-252		+/-289							
Yttrium-88	U	3.03	U	-1.23	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-5.42							
Zinc-65	U	13.3	U	-0.02	pCi/L	N/A		N/A			
	Uncertainty	+/-7.16		+/-8.63							
Zirconium-95	U	4.91	U	-1.82	pCi/L	N/A		N/A			
	Uncertainty	+/-6.57		+/-7.45							
QC1203252727	LCS										
Actinium-228			U	247	pCi/L					01/30/15	10:11
	Uncertainty			+/-1080							
Americium-241	1.10E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3680							
Antimony-124			U	70.7	pCi/L						
	Uncertainty			+/-183							
Antimony-125			U	413	pCi/L						
	Uncertainty			+/-571							
Barium-133			U	285	pCi/L						
	Uncertainty			+/-376							
Barium-140			U	444	pCi/L						
	Uncertainty			+/-736							
Beryllium-7			U	278	pCi/L						
	Uncertainty			+/-1800							
Bismuth-212			U	1800	pCi/L						
	Uncertainty			+/-2830							
Bismuth-214			U	-36.3	pCi/L						
	Uncertainty			+/-383							
Cerium-139				356	pCi/L						
	Uncertainty			+/-167							
Cerium-141			U	-143	pCi/L						
	Uncertainty			+/-215							
Cerium-144			U	-1040	pCi/L						
	Uncertainty			+/-1050							
Cesium-134			U	72.3	pCi/L						
	Uncertainty										



# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
				+/-257							
Cesium-136			U	143	pCi/L				MJH1	01/30/15	10:11
	Uncertainty			+/-375							
Cesium-137	44400			44900	pCi/L		101	(75%-125%)			
	Uncertainty			+/-887							
Chromium-51			U	1020	pCi/L						
	Uncertainty			+/-1640							
Cobalt-56			U	5.87	pCi/L						
	Uncertainty			+/-243							
Cobalt-57				2930	pCi/L						
	Uncertainty			+/-212							
Cobalt-58			U	-196	pCi/L						
	Uncertainty			+/-227							
Cobalt-60	52000			53100	pCi/L		102	(75%-125%)			
	Uncertainty			+/-1120							
Europium-152			U	-216	pCi/L						
	Uncertainty			+/-567							
Europium-154			U	71.6	pCi/L						
	Uncertainty			+/-378							
Europium-155			U	-56.1	pCi/L						
	Uncertainty			+/-570							
Iridium-192			U	-113	pCi/L						
	Uncertainty			+/-177							
Iron-59			U	-0.957	pCi/L						
	Uncertainty			+/-527							
Lead-210				1.46E+06	pCi/L						
	Uncertainty			+/-1.09E+05							
Lead-212			U	183	pCi/L						
	Uncertainty			+/-351							
Lead-214			U	337	pCi/L						
	Uncertainty			+/-422							
Manganese-54			U	89.0	pCi/L						
	Uncertainty			+/-232							
Mercury-203			U	-70.1	pCi/L						
	Uncertainty			+/-174							
Neodymium-147			U	1050	pCi/L						
	Uncertainty			+/-1360							
Neptunium-239			U	580	pCi/L						
	Uncertainty			+/-1440							
Niobium-94			U	-158	pCi/L						
	Uncertainty			+/-183							
Niobium-95			U	-33.5	pCi/L						
	Uncertainty			+/-211							

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Potassium-40			U	-948	pCi/L						
	Uncertainty			+/-815							
Promethium-144			U	31.5	pCi/L				MJH1	01/30/15	10:11
	Uncertainty			+/-185							
Promethium-146			U	-112	pCi/L						
	Uncertainty			+/-280							
Radium-228			U	247	pCi/L						
	Uncertainty			+/-1080							
Ruthenium-106			U	278	pCi/L						
	Uncertainty			+/-1710							
Silver-110m				1270	pCi/L						
	Uncertainty			+/-254							
Sodium-22			U	19.7	pCi/L						
	Uncertainty			+/-132							
Thallium-208			U	-50.9	pCi/L						
	Uncertainty			+/-198							
Thorium-230			U	12600	pCi/L						
	Uncertainty			+/-79900							
Thorium-234			U	-11500	pCi/L						
	Uncertainty			+/-11000							
Tin-113			U	250	pCi/L						
	Uncertainty			+/-246							
Uranium-235			U	70.7	pCi/L						
	Uncertainty			+/-920							
Uranium-238			U	-11500	pCi/L						
	Uncertainty			+/-11000							
Yttrium-88				231	pCi/L						
	Uncertainty			+/-109							
Zinc-65				8250	pCi/L						
	Uncertainty			+/-1260							
Zirconium-95			U	-124	pCi/L						
	Uncertainty			+/-374							
QC1203252725	MB										
Actinium-228			U	17.8	pCi/L					01/30/15	09:53
	Uncertainty			+/-17.8							
Americium-241			U	5.12	pCi/L						
	Uncertainty			+/-8.52							
Antimony-124			U	5.82	pCi/L						
	Uncertainty			+/-9.48							
Antimony-125			U	-7.52	pCi/L						
	Uncertainty			+/-13.3							
Barium-133			U	-1.76	pCi/L						
	Uncertainty			+/-5.18							
Barium-140			U	-1.15	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453371										
				+/-17.9							
Beryllium-7			U	54.0	pCi/L				MJH1	01/30/15	09:53
				Uncertainty							
Bismuth-212			U	29.9	pCi/L						
				Uncertainty							
Bismuth-214			U	1.88	pCi/L						
				Uncertainty							
Cerium-139			U	1.81	pCi/L						
				Uncertainty							
Cerium-141			U	3.62	pCi/L						
				Uncertainty							
Cerium-144			U	19.4	pCi/L						
				Uncertainty							
Cesium-134			U	-3.55	pCi/L						
				Uncertainty							
Cesium-136			U	1.20	pCi/L						
				Uncertainty							
Cesium-137			U	0.731	pCi/L						
				Uncertainty							
Chromium-51			U	-9.14	pCi/L						
				Uncertainty							
Cobalt-56			U	-1.68	pCi/L						
				Uncertainty							
Cobalt-57			U	1.75	pCi/L						
				Uncertainty							
Cobalt-58			U	1.59	pCi/L						
				Uncertainty							
Cobalt-60			U	0.716	pCi/L						
				Uncertainty							
Europium-152			U	-5.39	pCi/L						
				Uncertainty							
Europium-154			U	12.3	pCi/L						
				Uncertainty							
Europium-155			U	1.65	pCi/L						
				Uncertainty							
Iridium-192			U	0.652	pCi/L						
				Uncertainty							
Iron-59			U	2.44	pCi/L						
				Uncertainty							
Lead-210			U	7.98	pCi/L						
				Uncertainty							
Lead-212			U	-3.4	pCi/L						
				Uncertainty							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Lead-214			U	-4.89	pCi/L						
	Uncertainty			+/-9.08							
Manganese-54			U	-2.0	pCi/L				MJH1	01/30/15	09:53
	Uncertainty			+/-4.78							
Mercury-203			U	-0.0448	pCi/L						
	Uncertainty			+/-3.68							
Neodymium-147			U	-25.7	pCi/L						
	Uncertainty			+/-33.7							
Neptunium-239			U	-4.21	pCi/L						
	Uncertainty			+/-27.3							
Niobium-94			U	-2.39	pCi/L						
	Uncertainty			+/-4.87							
Niobium-95			U	2.28	pCi/L						
	Uncertainty			+/-5.49							
Potassium-40			U	-44.1	pCi/L						
	Uncertainty			+/-65.7							
Promethium-144			U	1.68	pCi/L						
	Uncertainty			+/-5.38							
Promethium-146			U	-1.89	pCi/L						
	Uncertainty			+/-5.62							
Radium-228			U	17.8	pCi/L						
	Uncertainty			+/-17.8							
Ruthenium-106			U	-30.2	pCi/L						
	Uncertainty			+/-43.7							
Silver-110m			U	-2.71	pCi/L						
	Uncertainty			+/-4.38							
Sodium-22			U	3.74	pCi/L						
	Uncertainty			+/-4.33							
Thallium-208			U	-1.26	pCi/L						
	Uncertainty			+/-5.88							
Thorium-230			U	-222	pCi/L						
	Uncertainty			+/-660							
Thorium-234			U	17.0	pCi/L						
	Uncertainty			+/-117							
Tin-113			U	0.104	pCi/L						
	Uncertainty			+/-5.65							
Uranium-235			U	5.90	pCi/L						
	Uncertainty			+/-32.0							
Uranium-238			U	17.0	pCi/L						
	Uncertainty			+/-117							
Yttrium-88			U	1.87	pCi/L						
	Uncertainty			+/-4.43							
Zinc-65			U	-3.64	pCi/L						
	Uncertainty			+/-9.50							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Zirconium-95			U	6.79	pCi/L						
	Uncertainty			+/-8.87							
Batch	1453373										
QC1203252730 365772021 DUP											
Actinium-228	U	17.9	U	22.0	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-19.1		+/-13.4							
Americium-241	U	-10.3	U	4.19	pCi/L	N/A		N/A			
	Uncertainty	+/-26.5		+/-29.7							
Antimony-124	U	1.90	U	-4.16	pCi/L	N/A		N/A			
	Uncertainty	+/-9.91		+/-6.94							
Antimony-125	U	3.69	U	-2.02	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-9.01							
Barium-133	U	-2.75	U	-1.14	pCi/L	N/A		N/A			
	Uncertainty	+/-5.90		+/-5.42							
Barium-140	U	-20	U	11.8	pCi/L	N/A		N/A			
	Uncertainty	+/-22.0		+/-27.0							
Beryllium-7	U	17.9	U	-6.63	pCi/L	N/A		N/A			
	Uncertainty	+/-36.6		+/-34.1							
Bismuth-212	U	-4.84	U	-3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-56.6		+/-51.3							
Bismuth-214		17.6	U	12.3	pCi/L	25.3		(0% - 100%)			
	Uncertainty	+/-14.0		+/-8.00							
Cerium-139	U	1.16	U	-1.53	pCi/L	N/A		N/A			
	Uncertainty	+/-3.54		+/-3.32							
Cerium-141	U	0.588	U	1.40	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-7.00							
Cerium-144	U	-1.05	U	9.11	pCi/L	N/A		N/A			
	Uncertainty	+/-41.6		+/-25.6							
Cesium-134	U	-3.94	U	2.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-4.48							
Cesium-136	U	4.51	U	2.17	pCi/L	N/A		N/A			
	Uncertainty	+/-6.70		+/-8.51							
Cesium-137	U	-2.13	U	-1.07	pCi/L	N/A		N/A			
	Uncertainty	+/-3.95		+/-3.31							
Chromium-51	U	-20.7	U	65.3	pCi/L	N/A		N/A			
	Uncertainty	+/-38.0		+/-47.1							
Cobalt-56	U	-0.119	U	2.28	pCi/L	N/A		N/A			
	Uncertainty	+/-6.37		+/-3.85							
Cobalt-57	U	-3.96	U	2.59	pCi/L	N/A		N/A			
	Uncertainty	+/-3.78		+/-2.82							
Cobalt-58	U	-1.48	U	-1.27	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-4.00							
Cobalt-60	U	-0.101	U	-0.505	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-3.79							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Europium-152	U	-7.87	U	0.790	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-10.3							
Europium-154	U	7.22	U	-4.6	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-12.6		+/-9.37							
Europium-155	U	5.92	U	-0.314	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-12.1							
Iridium-192	U	1.64	U	-1.66	pCi/L	N/A		N/A			
	Uncertainty	+/-3.98		+/-4.29							
Iron-59	U	2.23	U	-4.5	pCi/L	N/A		N/A			
	Uncertainty	+/-8.17		+/-10.1							
Lead-210	U	49.0	U	-222	pCi/L	N/A		N/A			
	Uncertainty	+/-646		+/-1320							
Lead-212	U	2.21	U	6.03	pCi/L	N/A		N/A			
	Uncertainty	+/-8.80		+/-10.2							
Lead-214	UI	0.00	U	11.7	pCi/L	N/A		N/A			
	Uncertainty	+/-13.0		+/-12.4							
Manganese-54	U	2.39	U	-2.0	pCi/L	N/A		N/A			
	Uncertainty	+/-4.97		+/-3.42							
Mercury-203	U	0.787	U	-1.64	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.30							
Neodymium-147	U	11.1	U	23.5	pCi/L	N/A		N/A			
	Uncertainty	+/-43.1		+/-48.7							
Neptunium-239	U	28.7	U	-23.2	pCi/L	N/A		N/A			
	Uncertainty	+/-34.0		+/-29.9							
Niobium-94	U	0.672	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.59		+/-3.72							
Niobium-95	U	-1.9	U	3.12	pCi/L	N/A		N/A			
	Uncertainty	+/-4.03		+/-3.51							
Potassium-40	U	8.28	U	-3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-62.3		+/-55.3							
Promethium-144	U	-0.958	U	0.965	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-3.46							
Promethium-146	U	4.55	U	0.671	pCi/L	N/A		N/A			
	Uncertainty	+/-5.05		+/-4.41							
Radium-228	U	17.9	U	22.0	pCi/L	N/A		N/A			
	Uncertainty	+/-19.1		+/-13.4							
Ruthenium-106	U	27.7	U	7.54	pCi/L	N/A		N/A			
	Uncertainty	+/-36.1		+/-32.0							
Silver-110m	U	0.172	U	2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-3.61		+/-3.04							
Sodium-22	U	2.21	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-3.34							
Thallium-208	U	-0.838	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-5.56		+/-5.06							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Thorium-230	U	-1210	U	1250	pCi/L	N/A		N/A			
	Uncertainty	+/-1660		+/-2360							
Thorium-234	U	14.0	U	247	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-269		+/-256							
Tin-113	U	0.754	U	-2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-6.73		+/-5.02							
Uranium-235	U	-13	U	20.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.3		+/-31.8							
Uranium-238	U	14.0	U	247	pCi/L	N/A		N/A			
	Uncertainty	+/-269		+/-256							
Yttrium-88	U	-3.21	U	-1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-5.08							
Zinc-65	U	-10.3	U	-2.78	pCi/L	N/A		N/A			
	Uncertainty	+/-9.59		+/-8.02							
Zirconium-95	U	-1.03	U	-0.14	pCi/L	N/A		N/A			
	Uncertainty	+/-7.75		+/-7.20							
QC1203252731	LCS										
Actinium-228				1630	pCi/L					02/02/15	10:06
	Uncertainty			+/-900							
Americium-241	1.10E+05			1.14E+05	pCi/L		103	(75%-125%)			
	Uncertainty			+/-2340							
Antimony-124			U	116	pCi/L						
	Uncertainty			+/-185							
Antimony-125			U	-465	pCi/L						
	Uncertainty			+/-487							
Barium-133			U	-69.9	pCi/L						
	Uncertainty			+/-202							
Barium-140			U	947	pCi/L						
	Uncertainty			+/-923							
Beryllium-7			U	308	pCi/L						
	Uncertainty			+/-1480							
Bismuth-212			U	1300	pCi/L						
	Uncertainty			+/-2250							
Bismuth-214			U	-84	pCi/L						
	Uncertainty			+/-300							
Cerium-139				376	pCi/L						
	Uncertainty			+/-169							
Cerium-141			U	31.7	pCi/L						
	Uncertainty			+/-190							
Cerium-144			U	82.8	pCi/L						
	Uncertainty			+/-832							
Cesium-134			U	68.1	pCi/L						
	Uncertainty			+/-236							
Cesium-136			U	-155	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
				+/-359							
Cesium-137	44400			44600	pCi/L		100	(75%-125%)	MJH1	02/02/15	10:06
	Uncertainty			+/-783							
Chromium-51			U	-734	pCi/L						
	Uncertainty			+/-1380							
Cobalt-56			U	-175	pCi/L						
	Uncertainty			+/-203							
Cobalt-57				2740	pCi/L						
	Uncertainty			+/-190							
Cobalt-58			U	20.0	pCi/L						
	Uncertainty			+/-184							
Cobalt-60	52000			52500	pCi/L		101	(75%-125%)			
	Uncertainty			+/-961							
Europium-152			U	46.8	pCi/L						
	Uncertainty			+/-455							
Europium-154			U	9.06	pCi/L						
	Uncertainty			+/-296							
Europium-155			U	-51.2	pCi/L						
	Uncertainty			+/-400							
Iridium-192			U	89.2	pCi/L						
	Uncertainty			+/-173							
Iron-59			U	282	pCi/L						
	Uncertainty			+/-454							
Lead-210				1.57E+06	pCi/L						
	Uncertainty			+/-35800							
Lead-212			U	-136	pCi/L						
	Uncertainty			+/-256							
Lead-214			U	32.5	pCi/L						
	Uncertainty			+/-340							
Manganese-54			U	66.2	pCi/L						
	Uncertainty			+/-188							
Mercury-203			U	-26.3	pCi/L						
	Uncertainty			+/-149							
Neodymium-147			U	473	pCi/L						
	Uncertainty			+/-1870							
Neptunium-239			U	-657	pCi/L						
	Uncertainty			+/-1160							
Niobium-94			U	123	pCi/L						
	Uncertainty			+/-145							
Niobium-95			U	-12.3	pCi/L						
	Uncertainty			+/-169							
Potassium-40			U	-17.4	pCi/L						
	Uncertainty			+/-747							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Promethium-144			U	-14.3	pCi/L						
	Uncertainty			+/-147							
Promethium-146			U	74.7	pCi/L				MJH1	02/02/15	10:06
	Uncertainty			+/-237							
Radium-228				1630	pCi/L						
	Uncertainty			+/-900							
Ruthenium-106			U	270	pCi/L						
	Uncertainty			+/-1400							
Silver-110m				1040	pCi/L						
	Uncertainty			+/-209							
Sodium-22			U	-15.1	pCi/L						
	Uncertainty			+/-107							
Thallium-208			U	77.5	pCi/L						
	Uncertainty			+/-155							
Thorium-230			U	41400	pCi/L						
	Uncertainty			+/-48000							
Thorium-234			U	-7200	pCi/L						
	Uncertainty			+/-5910							
Tin-113			U	263	pCi/L						
	Uncertainty			+/-314							
Uranium-235			U	-173	pCi/L						
	Uncertainty			+/-759							
Uranium-238			U	-7200	pCi/L						
	Uncertainty			+/-5910							
Yttrium-88				222	pCi/L						
	Uncertainty			+/-121							
Zinc-65				8400	pCi/L						
	Uncertainty			+/-994							
Zirconium-95			U	322	pCi/L						
	Uncertainty			+/-311							
QC1203252729	MB										
Actinium-228			U	3.85	pCi/L					02/02/15	09:53
	Uncertainty			+/-27.7							
Americium-241			U	3.85	pCi/L						
	Uncertainty			+/-21.7							
Antimony-124			U	1.88	pCi/L						
	Uncertainty			+/-10.3							
Antimony-125			U	-6.11	pCi/L						
	Uncertainty			+/-10.3							
Barium-133			U	5.40	pCi/L						
	Uncertainty			+/-5.26							
Barium-140			U	11.8	pCi/L						
	Uncertainty			+/-16.9							
Beryllium-7			U	-4.56	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Bismuth-212				+/-32.5							
			U	30.3	pCi/L				MJH1	02/02/15	09:53
Bismuth-214	Uncertainty			+/-61.9							
			UI	0.00	pCi/L						
Cerium-139	Uncertainty			+/-19.7							
			U	1.83	pCi/L						
Cerium-141	Uncertainty			+/-3.41							
			U	3.00	pCi/L						
Cerium-144	Uncertainty			+/-5.26							
			U	-5.83	pCi/L						
Cesium-134	Uncertainty			+/-21.6							
			U	1.32	pCi/L						
Cesium-136	Uncertainty			+/-4.38							
			U	2.01	pCi/L						
Cesium-137	Uncertainty			+/-6.05							
			U	1.19	pCi/L						
Chromium-51	Uncertainty			+/-4.16							
			U	-0.113	pCi/L						
Cobalt-56	Uncertainty			+/-34.2							
			U	0.227	pCi/L						
Cobalt-57	Uncertainty			+/-4.68							
			U	-0.0847	pCi/L						
Cobalt-58	Uncertainty			+/-2.63							
			U	1.62	pCi/L						
Cobalt-60	Uncertainty			+/-4.23							
			U	0.327	pCi/L						
Europium-152	Uncertainty			+/-4.24							
			U	14.0	pCi/L						
Europium-154	Uncertainty			+/-11.2							
			U	14.8	pCi/L						
Europium-155	Uncertainty			+/-12.7							
			U	4.07	pCi/L						
Iridium-192	Uncertainty			+/-11.6							
			U	0.486	pCi/L						
Iron-59	Uncertainty			+/-3.76							
			U	-1.37	pCi/L						
Lead-210	Uncertainty			+/-6.87							
			U	588	pCi/L						
Lead-212	Uncertainty			+/-816							
			U	2.78	pCi/L						
Lead-214	Uncertainty			+/-10.1							
			U	3.95	pCi/L						
	Uncertainty			+/-14.7							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453373										
Manganese-54			U	3.95	pCi/L						
	Uncertainty			+/-4.24							
Mercury-203			U	-1.09	pCi/L				MJH1	02/02/15	09:53
	Uncertainty			+/-3.73							
Neodymium-147			U	-16.6	pCi/L						
	Uncertainty			+/-33.0							
Neptunium-239			U	5.95	pCi/L						
	Uncertainty			+/-27.9							
Niobium-94			U	-2.37	pCi/L						
	Uncertainty			+/-3.87							
Niobium-95			U	3.06	pCi/L						
	Uncertainty			+/-4.77							
Potassium-40			U	7.13	pCi/L						
	Uncertainty			+/-68.6							
Promethium-144			U	0.00321	pCi/L						
	Uncertainty			+/-3.86							
Promethium-146			U	-0.227	pCi/L						
	Uncertainty			+/-5.00							
Radium-228			U	3.85	pCi/L						
	Uncertainty			+/-27.7							
Ruthenium-106			U	6.16	pCi/L						
	Uncertainty			+/-36.9							
Silver-110m			U	-0.432	pCi/L						
	Uncertainty			+/-3.97							
Sodium-22			U	5.14	pCi/L						
	Uncertainty			+/-4.43							
Thallium-208			U	-1.21	pCi/L						
	Uncertainty			+/-5.85							
Thorium-230			U	-938	pCi/L						
	Uncertainty			+/-1490							
Thorium-234			U	57.7	pCi/L						
	Uncertainty			+/-376							
Tin-113			U	2.43	pCi/L						
	Uncertainty			+/-5.01							
Uranium-235			U	-24.9	pCi/L						
	Uncertainty			+/-27.8							
Uranium-238			U	57.7	pCi/L						
	Uncertainty			+/-376							
Yttrium-88			U	-1.7	pCi/L						
	Uncertainty			+/-5.38							
Zinc-65			U	6.73	pCi/L						
	Uncertainty			+/-8.44							
Zirconium-95			U	1.02	pCi/L						
	Uncertainty			+/-6.54							

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1457183										
QC1203263279	365772001	DUP									
Alpha	U	1.15	U	1.15	pCi/L	N/A		N/A	KXB2	02/16/15	09:30
	Uncertainty	+/-2.46		+/-2.32							
Beta		11.5		10.9	pCi/L	5.92		(0% - 100%)			
	Uncertainty	+/-3.34		+/-3.40							
QC1203263282	LCS										
Alpha	122			143	pCi/L		117	(75%-125%)		02/17/15	06:52
	Uncertainty			+/-13.1							
Beta	474			551	pCi/L		116	(75%-125%)			
	Uncertainty			+/-19.1							
QC1203263278	MB										
Alpha			U	-2.04	pCi/L					02/16/15	09:30
	Uncertainty			+/-1.04							
Beta			U	-1.48	pCi/L						
	Uncertainty			+/-2.56							
QC1203263280	365772001	MS									
Alpha	486	U	1.15	495	pCi/L		102	(75%-125%)		02/17/15	06:52
	Uncertainty		+/-2.46	+/-53.4							
Beta	1900		11.5	2170	pCi/L		114	(75%-125%)			
	Uncertainty		+/-3.34	+/-76.1							
QC1203263281	365772001	MSD									
Alpha	486	U	1.15	496	pCi/L	0.263	102	(0%-20%)		02/17/15	06:52
	Uncertainty		+/-2.46	+/-51.3							
Beta	1900		11.5	2220	pCi/L	1.87	116	(0%-20%)			
	Uncertainty		+/-3.34	+/-76.2							
Batch	1457184										
QC1203263284	365772015	DUP									
Alpha	U	-0.189	U	1.76	pCi/L	N/A		N/A	AXJ1	02/16/15	08:50
	Uncertainty	+/-1.84		+/-2.50							
Beta		11.6		10.3	pCi/L	12.1		(0% - 100%)			
	Uncertainty	+/-3.51		+/-3.39							
QC1203263287	LCS										
Alpha	122			135	pCi/L		111	(75%-125%)		02/16/15	08:49
	Uncertainty			+/-12.3							
Beta	474			553	pCi/L		117	(75%-125%)			
	Uncertainty			+/-19.1							
QC1203263283	MB										
Alpha			U	-0.513	pCi/L					02/16/15	08:51
	Uncertainty			+/-1.14							
Beta			U	-1.63	pCi/L						
	Uncertainty			+/-2.57							
QC1203263285	365772015	MS									
Alpha	486	U	-0.189	600	pCi/L		123	(75%-125%)		02/16/15	08:51
	Uncertainty		+/-1.84	+/-58.3							
Beta	1900		11.6	2320	pCi/L		122	(75%-125%)			
	Uncertainty		+/-3.51	+/-81.8							
QC1203263286	365772015	MSD									

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1457184										
Alpha	486	U	-0.189	595	pCi/L	0.942	122	(0%-20%)		02/16/15	18:17
	Uncertainty		+/-1.84	+/-54.0							
Beta	1900		11.6	2200	pCi/L	5.31	115	(0%-20%)	AXJ1		
	Uncertainty		+/-3.51	+/-75.8							
<b>Rad Liquid Scintillation</b>											
Batch	1453895										
QC1203254136	365648001	DUP									
Technetium-99		U	-41.1	U	-5.81	pCi/L	N/A		N/AMYM1	02/10/15	10:21
		Uncertainty	+/-122		+/-126						
QC1203254137	LCS										
Technetium-99	4340				4110	pCi/L	94.7	(75%-125%)		02/10/15	10:37
	Uncertainty				+/-240						
QC1203254135	MB										
Technetium-99			U		-68.1	pCi/L				02/10/15	10:04
					+/-120						
Batch	1453898										
QC1203254140	365772016	DUP									
Technetium-99		U	63.0	U	49.3	pCi/L	N/A		N/AMYM1	02/15/15	15:43
		Uncertainty	+/-118		+/-119						
QC1203254141	LCS										
Technetium-99	4340				3830	pCi/L	88.1	(75%-125%)		02/15/15	16:00
	Uncertainty				+/-225						
QC1203254139	MB										
Technetium-99			U		-5.43	pCi/L				02/15/15	15:27
					+/-114						

### 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 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

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 17 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12





May 19, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Ground Water Well Liquid Analysis  
Work Order: 371595

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: April

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

371595

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/9/15 09:46	1000	X	X	X		X	REC
WELL	#3A	4/16/15 09:18	1000	X	X	X		X	REC
WELL	#7	4/13/15 11:28	1000	X	X	X		X	REC
WELL	#10	4/13/15 11:43	1000	X	X	X		X	REC
WELL	#13R	4/13/15 11:08	1000	X	X	X		X	REC
WELL	#14	4/14/15 11:37	1000	X	X	X		X	REC
WELL	#15	4/14/15 10:55	1000	X	X	X		X	REC
WELL	#16	4/14/15 11:52	1000	X	X	X		X	REC
WELL	#17	4/14/15 09:01	1000	X	X	X		X	REC
WELL	#18	4/13/15 10:17	1000	X	X	X		X	REC
WELL	#20	4/16/15 10:05	1000	X	X	X		X	REC
WELL	#22	4/13/15 09:58	1000	X	X	X		X	REC
WELL	#23R	4/14/15 11:13	1000	X	X	X		X	REC
WELL	#24	4/14/15 08:26	1000	X	X	X		X	REC
WELL	#26	4/9/15 10:57	1000	X	X	X		X	REC
WELL	#27	4/16/15 09:40	1000	X	X	X		X	REC
WELL	#28	4/13/15 10:40	1000	X	X	X		X	REC
WELL	#29	4/13/15 09:19	1000	X	X	X		X	REC
WELL	#30	4/13/15 09:38	1000	X	X	X		X	REC
WELL	#32	4/13/15 12:03	1000	X	X	X		X	REC
WELL	#33	4/14/15 10:10	1000	X	X	X		X	REC
WELL	#38	4/13/15 08:57	1000	X	X	X		X	REC
WELL	#39	4/14/15 09:28	1000	X	X	X		X	REC
WELL	#41R	4/9/15 10:09	1000	X	X	X		X	REC
WELL	#43	4/14/15 09:50	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 4/22/15

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.

Rec'd by -- P. Went

Date -- 4-22-15 TIME -- 16:30

Year: 2015

371595

[illegible]

Date Shipped: 4/22/15  
RLR Block 8/22/15 1630

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DATE - 3-22-15 TIME - 16:30

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client:		SDG/AR/COC/Work Order: <u>371395</u>	
Received By: <u>P. J. Dent</u>		Date Received: <u>4.22.15</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0/cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>17c</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>201404336</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?			<input checked="" type="checkbox"/>	Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?			<input checked="" type="checkbox"/>	Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?			<input checked="" type="checkbox"/>	
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS <u>Field Services</u> <u>Courier</u> Other  <u>Gel's</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 371595 GEL Work Order: 371595

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371595001  
Matrix: Ground Water  
Collect Date: 09-APR-15 09:46  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-20.4	+/-19.4	30.4		pCi/L		MJH1	04/28/15	0912	1474077	1
Americium-241	U	16.3	+/-33.1	52.9		pCi/L						
Antimony-124	U	1.18	+/-11.0	21.7		pCi/L						
Antimony-125	U	4.83	+/-11.1	18.4		pCi/L						
Barium-133	U	-1.35	+/-4.94	8.37		pCi/L						
Barium-140	U	-19.2	+/-35.7	61.5		pCi/L						
Beryllium-7	U	6.01	+/-34.2	63.4		pCi/L						
Bismuth-212	U	-15.9	+/-59.9	97.4		pCi/L						
Bismuth-214	U	-14.7	+/-12.6	15.2		pCi/L						
Cerium-139	U	1.65	+/-3.47	5.67		pCi/L						
Cerium-141	U	-4.61	+/-7.43	12.9		pCi/L						
Cerium-144	U	6.76	+/-21.3	39.0		pCi/L						
Cesium-134	U	2.56	+/-4.31	8.47		pCi/L						
Cesium-136	U	-3.66	+/-13.3	24.0		pCi/L						
Cesium-137	U	-0.249	+/-3.89	6.96	10.0	pCi/L						
Chromium-51	U	-6.74	+/-47.8	82.3		pCi/L						
Cobalt-56	U	4.67	+/-4.26	8.79		pCi/L						
Cobalt-57	U	-1.17	+/-2.86	5.06		pCi/L						
Cobalt-58	U	-1.73	+/-3.90	6.99		pCi/L						
Cobalt-60	U	-1.91	+/-3.57	6.42		pCi/L						
Europium-152	U	-2.24	+/-11.5	19.6		pCi/L						
Europium-154	U	13.8	+/-12.4	26.1		pCi/L						
Europium-155	U	0.070	+/-12.2	22.1		pCi/L						
Iridium-192	U	-0.259	+/-4.31	7.46		pCi/L						
Iron-59	U	-5.36	+/-9.49	16.3		pCi/L						
Lead-210	U	1440	+/-1180	2200		pCi/L						
Lead-212	U	-12.4	+/-8.93	12.6		pCi/L						
Lead-214	U	-6.17	+/-10.3	15.6		pCi/L						
Manganese-54	U	-0.225	+/-3.91	7.24		pCi/L						
Mercury-203	U	-0.0597	+/-4.46	7.79		pCi/L						
Neodymium-147	U	3.63	+/-74.6	136		pCi/L						
Neptunium-239	U	-14.6	+/-31.1	54.9		pCi/L						
Niobium-94	U	-2.19	+/-3.66	6.14		pCi/L						
Niobium-95	U	-0.0521	+/-5.00	8.06		pCi/L						
Potassium-40	U	-66.8	+/-48.7	76.5		pCi/L						
Promethium-144	U	1.11	+/-3.63	6.71		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371595001

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.140	+/-4.61	8.42	pCi/L
Radium-228	U	-20.4	+/-19.4	30.4	pCi/L
Ruthenium-106	U	15.2	+/-33.4	61.6	pCi/L
Silver-110m	U	1.57	+/-3.68	6.91	pCi/L
Sodium-22	U	4.95	+/-4.39	9.24	pCi/L
Thallium-208	U	-0.92	+/-5.08	7.79	pCi/L
Thorium-230	U	-1060	+/-1770	2770	pCi/L
Thorium-234	U	55.9	+/-404	466	pCi/L
Tin-113	U	2.13	+/-5.23	9.79	pCi/L
Uranium-235	U	-29	+/-27.1	40.6	pCi/L
Uranium-238	U	55.9	+/-404	466	pCi/L
Yttrium-88	U	5.65	+/-5.00	11.2	pCi/L
Zinc-65	U	0.997	+/-10.5	16.9	pCi/L
Zirconium-95	U	-1.64	+/-8.86	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.764	+/-0.850	1.67	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		6.31	+/-1.06	1.38	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-53.1	+/-116	206	300	pCi/L	MYM1	05/18/15	1141	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 3A	Project:	WNUC00129
Sample ID:	371595002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:18		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		29.2	+/-20.5	19.7		pCi/L		MJH1	04/28/15	0925 1474077	1
Americium-241	U	11.4	+/-22.6	38.2		pCi/L					
Antimony-124	U	-1.65	+/-7.54	14.3		pCi/L					
Antimony-125	U	-7.27	+/-8.57	14.3		pCi/L					
Barium-133	U	-1.36	+/-4.12	6.35		pCi/L					
Barium-140	U	17.6	+/-24.3	39.5		pCi/L					
Beryllium-7	U	25.6	+/-27.2	53.4		pCi/L					
Bismuth-212	U	19.7	+/-47.3	82.3		pCi/L					
Bismuth-214		15.1	+/-13.3	11.8		pCi/L					
Cerium-139	U	0.334	+/-2.81	4.90		pCi/L					
Cerium-141	U	1.82	+/-9.42	9.49		pCi/L					
Cerium-144	U	-0.342	+/-18.4	32.2		pCi/L					
Cesium-134	U	-0.82	+/-4.63	7.15		pCi/L					
Cesium-136	U	-4.01	+/-8.70	15.1		pCi/L					
Cesium-137	U	4.22	+/-3.30	6.88	10.0	pCi/L					
Chromium-51	U	5.29	+/-33.1	60.6		pCi/L					
Cobalt-56	U	-0.402	+/-3.29	6.07		pCi/L					
Cobalt-57	U	-0.785	+/-2.48	4.27		pCi/L					
Cobalt-58	U	0.383	+/-3.86	6.57		pCi/L					
Cobalt-60	U	0.0181	+/-3.19	6.26		pCi/L					
Europium-152	U	-7.42	+/-10.4	15.4		pCi/L					
Europium-154	U	8.37	+/-7.77	20.8		pCi/L					
Europium-155	U	-8.1	+/-11.7	17.5		pCi/L					
Iridium-192	U	-0.156	+/-3.14	5.69		pCi/L					
Iron-59	U	-6.77	+/-7.16	11.5		pCi/L					
Lead-210	U	408	+/-690	1300		pCi/L					
Lead-212	U	-0.482	+/-8.29	12.3		pCi/L					
Lead-214		26.1	+/-13.2	18.0		pCi/L					
Manganese-54	U	-1.78	+/-3.00	5.23		pCi/L					
Mercury-203	U	-6.62	+/-3.70	5.29		pCi/L					
Neodymium-147	U	-1.39	+/-39.2	70.7		pCi/L					
Neptunium-239	U	-11.3	+/-26.5	45.4		pCi/L					
Niobium-94	U	-1.42	+/-2.79	4.97		pCi/L					
Niobium-95	U	-2.91	+/-4.62	7.04		pCi/L					
Potassium-40	U	-30.2	+/-48.9	92.0		pCi/L					
Promethium-144	U	0.242	+/-3.13	5.88		pCi/L					



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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 371595002

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.84	+/-4.20	7.26	pCi/L
Radium-228		29.2	+/-20.5	19.7	pCi/L
Ruthenium-106	U	-17	+/-28.6	47.6	pCi/L
Silver-110m	U	-2.42	+/-3.23	5.63	pCi/L
Sodium-22	U	2.95	+/-2.74	7.18	pCi/L
Thallium-208	U	-4.33	+/-5.16	7.35	pCi/L
Thorium-230	U	996	+/-1710	2430	pCi/L
Thorium-234	U	76.2	+/-246	394	pCi/L
Tin-113	U	-1.73	+/-3.95	6.89	pCi/L
Uranium-235	U	6.18	+/-32.1	31.5	pCi/L
Uranium-238	U	76.2	+/-246	394	pCi/L
Yttrium-88	U	-2.87	+/-3.60	5.90	pCi/L
Zinc-65	U	-6.19	+/-8.45	11.5	pCi/L
Zirconium-95	U	-0.173	+/-5.56	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.348	+/-0.709	1.24	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta	U	1.18	+/-0.940	1.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-77	+/-119	214	300	pCi/L	MYM1	05/18/15	1157	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	371595003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	11.6	+/-22.8	24.9		pCi/L		MJH1	04/28/15	0955	1474077	1
Americium-241	U	13.9	+/-23.1	42.8		pCi/L						
Antimony-124	U	8.51	+/-11.1	23.5		pCi/L						
Antimony-125	U	-1.77	+/-11.3	19.5		pCi/L						
Barium-133	U	5.88	+/-5.90	9.03		pCi/L						
Barium-140	U	-12.9	+/-32.6	57.7		pCi/L						
Beryllium-7	U	4.72	+/-40.0	70.1		pCi/L						
Bismuth-212	U	97.2	+/-69.3	109		pCi/L						
Bismuth-214		24.0	+/-16.2	14.3		pCi/L						
Cerium-139	U	-1.74	+/-3.71	6.18		pCi/L						
Cerium-141	U	2.67	+/-7.98	13.9		pCi/L						
Cerium-144	U	24.4	+/-23.8	43.2		pCi/L						
Cesium-134	U	-0.322	+/-5.41	8.29		pCi/L						
Cesium-136	U	-8.17	+/-12.3	21.2		pCi/L						
Cesium-137	U	-1.6	+/-5.18	8.12	10.0	pCi/L						
Chromium-51	U	-39.6	+/-45.2	75.9		pCi/L						
Cobalt-56	U	1.58	+/-5.31	9.62		pCi/L						
Cobalt-57	U	-2.43	+/-2.95	4.93		pCi/L						
Cobalt-58	U	5.92	+/-7.67	7.67		pCi/L						
Cobalt-60	U	2.19	+/-4.33	8.53		pCi/L						
Europium-152	U	3.52	+/-13.4	21.1		pCi/L						
Europium-154	U	1.62	+/-13.1	24.5		pCi/L						
Europium-155	U	-0.744	+/-15.0	23.0		pCi/L						
Iridium-192	U	2.47	+/-4.21	7.71		pCi/L						
Iron-59	U	4.76	+/-10.6	20.2		pCi/L						
Lead-210	U	-769	+/-891	1170		pCi/L						
Lead-212	U	-5.68	+/-8.19	13.0		pCi/L						
Lead-214	U	10.3	+/-12.4	18.5		pCi/L						
Manganese-54	U	-2.04	+/-4.36	7.41		pCi/L						
Mercury-203	U	-2.35	+/-4.43	7.68		pCi/L						
Neodymium-147	U	20.4	+/-65.2	122		pCi/L						
Neptunium-239	U	-5.37	+/-31.9	55.3		pCi/L						
Niobium-94	U	1.36	+/-4.04	6.61		pCi/L						
Niobium-95	U	-2.3	+/-5.65	8.81		pCi/L						
Potassium-40	U	-31.6	+/-66.8	121		pCi/L						
Promethium-144	U	-0.861	+/-5.12	7.77		pCi/L						

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 7 Project: WNUC00129  
Sample ID: 371595003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.417	+/-5.30	9.28	pCi/L
Radium-228	U	11.6	+/-22.8	24.9	pCi/L
Ruthenium-106	U	-6.15	+/-34.4	61.8	pCi/L
Silver-110m	U	-1.14	+/-4.26	7.51	pCi/L
Sodium-22	U	0.571	+/-4.64	8.64	pCi/L
Thallium-208	U	1.18	+/-6.18	7.24	pCi/L
Thorium-230	U	946	+/-1450	2670	pCi/L
Thorium-234	U	-185	+/-262	432	pCi/L
Tin-113	U	-0.85	+/-5.58	9.69	pCi/L
Uranium-235	U	2.64	+/-30.1	47.0	pCi/L
Uranium-238	U	-185	+/-262	432	pCi/L
Yttrium-88	U	-2.19	+/-5.68	8.37	pCi/L
Zinc-65	U	-8.21	+/-10.2	17.2	pCi/L
Zirconium-95	U	2.37	+/-7.91	14.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.02	+/-3.23	4.41	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		109	+/-4.14	3.24	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	52.1	+/-125	215	300	pCi/L	MYM1	05/18/15	1214	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	371595004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:43		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.64	+/-19.1	30.2		pCi/L		MJH1	04/28/15	0956 1474077	1
Americium-241	U	17.6	+/-32.5	55.0		pCi/L					
Antimony-124	U	-0.572	+/-9.80	19.3		pCi/L					
Antimony-125	U	4.70	+/-10.7	18.0		pCi/L					
Barium-133	U	-1.55	+/-5.32	8.19		pCi/L					
Barium-140	U	29.9	+/-28.0	55.9		pCi/L					
Beryllium-7	U	17.5	+/-35.3	66.4		pCi/L					
Bismuth-212	U	-3.67	+/-47.2	88.6		pCi/L					
Bismuth-214	U	12.3	+/-12.9	19.1		pCi/L					
Cerium-139	U	1.76	+/-3.13	5.62		pCi/L					
Cerium-141	U	-2.7	+/-7.08	11.4		pCi/L					
Cerium-144	U	5.51	+/-21.5	38.2		pCi/L					
Cesium-134	U	1.74	+/-3.79	7.08		pCi/L					
Cesium-136	U	0.606	+/-10.9	20.4		pCi/L					
Cesium-137	U	-0.729	+/-3.68	6.81	10.0	pCi/L					
Chromium-51	U	28.1	+/-39.6	75.7		pCi/L					
Cobalt-56	U	1.03	+/-3.91	7.60		pCi/L					
Cobalt-57	U	-1.58	+/-2.95	4.97		pCi/L					
Cobalt-58	U	0.262	+/-3.79	6.87		pCi/L					
Cobalt-60	U	-0.389	+/-3.86	7.49		pCi/L					
Europium-152	U	-0.00448	+/-9.76	17.8		pCi/L					
Europium-154	U	3.64	+/-11.0	22.6		pCi/L					
Europium-155	U	0.160	+/-11.3	20.1		pCi/L					
Iridium-192	U	-2.29	+/-3.65	6.33		pCi/L					
Iron-59	U	1.01	+/-7.16	14.1		pCi/L					
Lead-210	U	1370	+/-1520	2570		pCi/L					
Lead-212	U	9.47	+/-10.0	13.6		pCi/L					
Lead-214	U	3.96	+/-13.0	17.4		pCi/L					
Manganese-54	U	-2.62	+/-3.90	6.72		pCi/L					
Mercury-203	U	1.38	+/-4.21	7.81		pCi/L					
Neodymium-147	U	87.3	+/-63.8	129		pCi/L					
Neptunium-239	U	17.9	+/-28.7	52.4		pCi/L					
Niobium-94	U	0.584	+/-3.77	7.12		pCi/L					
Niobium-95	U	0.237	+/-3.79	7.22		pCi/L					
Potassium-40	U	40.9	+/-49.6	61.0		pCi/L					
Promethium-144	U	-0.991	+/-3.55	6.47		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 371595004

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.05	+/-4.48	7.92	pCi/L
Radium-228	U	-3.64	+/-19.1	30.2	pCi/L
Ruthenium-106	U	11.0	+/-32.4	60.4	pCi/L
Silver-110m	U	-0.964	+/-3.77	5.98	pCi/L
Sodium-22	U	1.43	+/-3.91	8.06	pCi/L
Thallium-208	U	-2.63	+/-5.35	7.94	pCi/L
Thorium-230	UI	0.00	+/-3270	2820	pCi/L
Thorium-234	U	135	+/-381	442	pCi/L
Tin-113	U	-1.6	+/-4.53	7.97	pCi/L
Uranium-235	U	4.46	+/-27.4	39.7	pCi/L
Uranium-238	U	135	+/-381	442	pCi/L
Yttrium-88	U	0.821	+/-3.60	7.80	pCi/L
Zinc-65	U	-10.9	+/-8.52	12.7	pCi/L
Zirconium-95	U	-3.49	+/-6.96	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.40	+/-1.59	2.66	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		92.7	+/-3.04	1.67	5.00	pCi/L					
Alpha	U	1.92	+/-1.56	2.48	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		85.0	+/-2.81	1.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-59.8	+/-124	220	300	pCi/L	MYM1	05/18/15	1230	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 371595004

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371595005  
Matrix: Ground Water  
Collect Date: 13-APR-15 11:08  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.04	+/-24.7	33.7		pCi/L		MJH1	04/28/15	0956 1474077	1
Americium-241	U	-12.7	+/-25.9	43.8		pCi/L					
Antimony-124	U	-1.56	+/-9.79	18.7		pCi/L					
Antimony-125	U	-1.64	+/-9.48	17.2		pCi/L					
Barium-133	U	2.07	+/-5.46	8.65		pCi/L					
Barium-140	U	10.6	+/-29.9	50.0		pCi/L					
Beryllium-7	U	-21.4	+/-36.7	63.7		pCi/L					
Bismuth-212	U	14.3	+/-59.5	96.4		pCi/L					
Bismuth-214	U	5.08	+/-12.4	15.7		pCi/L					
Cerium-139	U	1.33	+/-3.39	6.17		pCi/L					
Cerium-141	U	8.13	+/-13.8	13.4		pCi/L					
Cerium-144	U	21.7	+/-24.7	46.1		pCi/L					
Cesium-134	U	1.41	+/-4.43	7.62		pCi/L					
Cesium-136	U	-7.69	+/-13.1	20.5		pCi/L					
Cesium-137	U	1.75	+/-4.38	8.15	10.0	pCi/L					
Chromium-51	U	42.2	+/-45.8	77.1		pCi/L					
Cobalt-56	U	-4.21	+/-4.85	8.23		pCi/L					
Cobalt-57	U	-0.813	+/-3.02	5.39		pCi/L					
Cobalt-58	U	3.23	+/-4.04	8.22		pCi/L					
Cobalt-60	U	1.77	+/-4.08	8.37		pCi/L					
Europium-152	U	2.76	+/-12.1	21.3		pCi/L					
Europium-154	U	13.3	+/-15.4	24.4		pCi/L					
Europium-155	U	-1.45	+/-12.6	21.2		pCi/L					
Iridium-192	UI	0.00	+/-4.37	7.76		pCi/L					
Iron-59	U	6.49	+/-9.77	17.7		pCi/L					
Lead-210	U	-72.4	+/-1090	1630		pCi/L					
Lead-212	UI	0.00	+/-13.5	16.7		pCi/L					
Lead-214	U	14.9	+/-15.2	18.0		pCi/L					
Manganese-54	U	1.32	+/-3.92	7.56		pCi/L					
Mercury-203	U	3.69	+/-4.58	8.42		pCi/L					
Neodymium-147	U	24.6	+/-61.2	113		pCi/L					
Neptunium-239	U	-11.1	+/-36.2	56.7		pCi/L					
Niobium-94	U	2.54	+/-3.61	6.96		pCi/L					
Niobium-95	U	-4.46	+/-5.14	7.37		pCi/L					
Potassium-40	U	30.8	+/-80.3	65.7		pCi/L					
Promethium-144	U	-3.65	+/-4.15	6.77		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371595005

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.71	+/-4.79	9.25	pCi/L
Radium-228	U	1.04	+/-24.7	33.7	pCi/L
Ruthenium-106	U	-13.3	+/-38.1	66.3	pCi/L
Silver-110m	U	1.88	+/-3.89	7.34	pCi/L
Sodium-22	U	4.70	+/-5.44	8.00	pCi/L
Thallium-208	U	1.43	+/-6.02	9.40	pCi/L
Thorium-230	U	-780	+/-1760	2770	pCi/L
Thorium-234	U	-85.9	+/-267	420	pCi/L
Tin-113	U	3.00	+/-4.93	9.44	pCi/L
Uranium-235	U	26.0	+/-44.2	42.6	pCi/L
Uranium-238	U	-85.9	+/-267	420	pCi/L
Yttrium-88	U	0.376	+/-5.28	10.2	pCi/L
Zinc-65	U	5.05	+/-8.22	15.1	pCi/L
Zirconium-95	U	0.625	+/-7.49	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.76	+/-1.47	2.89	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		140	+/-3.85	2.68	5.00	pCi/L					
Alpha	U	0.805	+/-1.86	3.21	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		146	+/-4.13	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	117	+/-129	216	300	pCi/L	MYM1	05/18/15	1247	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371595005

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 14  
Sample ID: 371595006  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:37  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-16.4	+/-18.9	29.9		pCi/L		MJH1	04/28/15	0956 1474077	1
Americium-241	U	8.70	+/-17.1	26.0		pCi/L					
Antimony-124	U	7.90	+/-10.7	22.4		pCi/L					
Antimony-125	U	-3.77	+/-8.69	15.0		pCi/L					
Barium-133	U	-2.94	+/-4.85	7.14		pCi/L					
Barium-140	U	-2.23	+/-23.4	41.4		pCi/L					
Beryllium-7	U	20.5	+/-32.6	61.1		pCi/L					
Bismuth-212	U	-14	+/-53.1	86.7		pCi/L					
Bismuth-214		19.3	+/-14.3	12.5		pCi/L					
Cerium-139	U	-2.14	+/-2.88	4.69		pCi/L					
Cerium-141	U	3.86	+/-7.71	10.1		pCi/L					
Cerium-144	U	0.320	+/-20.5	35.3		pCi/L					
Cesium-134	U	-2.05	+/-3.58	6.24		pCi/L					
Cesium-136	U	-0.887	+/-9.45	17.2		pCi/L					
Cesium-137	U	-0.333	+/-3.57	6.59	10.0	pCi/L					
Chromium-51	U	16.1	+/-34.2	63.7		pCi/L					
Cobalt-56	U	-1.24	+/-4.68	7.40		pCi/L					
Cobalt-57	U	-0.425	+/-2.52	4.33		pCi/L					
Cobalt-58	U	-3.57	+/-3.29	5.31		pCi/L					
Cobalt-60	U	0.058	+/-3.65	7.04		pCi/L					
Europium-152	U	-4.28	+/-9.07	15.8		pCi/L					
Europium-154	U	-2.06	+/-9.56	18.0		pCi/L					
Europium-155	U	-3.65	+/-12.0	18.2		pCi/L					
Iridium-192	U	-1.83	+/-3.25	5.62		pCi/L					
Iron-59	U	6.30	+/-6.64	14.2		pCi/L					
Lead-210	U	-199	+/-475	717		pCi/L					
Lead-212	U	7.59	+/-9.85	12.0		pCi/L					
Lead-214	U	10.0	+/-11.5	16.7		pCi/L					
Manganese-54	U	-2.25	+/-3.67	6.32		pCi/L					
Mercury-203	U	2.45	+/-3.40	6.45		pCi/L					
Neodymium-147	U	-18.8	+/-51.7	88.5		pCi/L					
Neptunium-239	U	-18.9	+/-26.5	44.1		pCi/L					
Niobium-94	U	1.70	+/-3.30	6.38		pCi/L					
Niobium-95	U	-0.451	+/-3.72	6.81		pCi/L					
Potassium-40	U	-15.1	+/-50.4	91.8		pCi/L					
Promethium-144	U	-1.3	+/-3.64	6.49		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 14 Project: WNUC00129  
Sample ID: 371595006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.47	+/-4.35	8.11	pCi/L
Radium-228	U	-16.4	+/-18.9	29.9	pCi/L
Ruthenium-106	U	11.2	+/-30.1	58.0	pCi/L
Silver-110m	U	2.12	+/-3.12	6.21	pCi/L
Sodium-22	U	-0.666	+/-3.38	6.38	pCi/L
Thallium-208	U	2.79	+/-5.23	7.66	pCi/L
Thorium-230	U	1140	+/-1770	1730	pCi/L
Thorium-234	U	51.2	+/-205	210	pCi/L
Tin-113	U	0.751	+/-4.07	7.44	pCi/L
Uranium-235	U	12.6	+/-25.2	32.0	pCi/L
Uranium-238	U	51.2	+/-205	210	pCi/L
Yttrium-88	U	-0.269	+/-3.94	7.60	pCi/L
Zinc-65	U	1.81	+/-8.71	16.2	pCi/L
Zirconium-95	U	6.60	+/-6.44	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.22	+/-0.924	1.73	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		8.20	+/-1.47	2.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.3	+/-123	217	300	pCi/L	MYM1	05/18/15	1303	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	371595007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:55		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.915	+/-19.8	30.5		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	-1.7	+/-30.5	49.1		pCi/L					
Antimony-124	U	-5.11	+/-12.8	22.0		pCi/L					
Antimony-125	U	2.59	+/-10.0	18.2		pCi/L					
Barium-133	U	-2.48	+/-5.18	7.71		pCi/L					
Barium-140	U	-0.151	+/-26.7	47.4		pCi/L					
Beryllium-7	U	16.2	+/-34.0	63.2		pCi/L					
Bismuth-212	U	-19.2	+/-59.9	106		pCi/L					
Bismuth-214	UI	0.00	+/-12.8	18.0		pCi/L					
Cerium-139	U	1.19	+/-3.27	5.74		pCi/L					
Cerium-141	U	-4.87	+/-7.81	12.0		pCi/L					
Cerium-144	U	9.30	+/-27.5	39.8		pCi/L					
Cesium-134	U	1.67	+/-4.67	8.41		pCi/L					
Cesium-136	U	-3.91	+/-10.9	19.9		pCi/L					
Cesium-137	U	-1.29	+/-3.62	6.49	10.0	pCi/L					
Chromium-51	U	3.50	+/-40.3	72.8		pCi/L					
Cobalt-56	U	-1.71	+/-4.40	7.69		pCi/L					
Cobalt-57	U	0.207	+/-2.99	5.23		pCi/L					
Cobalt-58	U	-1.39	+/-3.71	6.57		pCi/L					
Cobalt-60	U	-3.4	+/-4.40	7.40		pCi/L					
Europium-152	U	1.85	+/-10.5	19.1		pCi/L					
Europium-154	U	-6.08	+/-12.9	19.0		pCi/L					
Europium-155	U	-0.789	+/-12.3	21.6		pCi/L					
Iridium-192	U	0.525	+/-3.96	7.17		pCi/L					
Iron-59	U	3.00	+/-8.02	16.1		pCi/L					
Lead-210	U	76.9	+/-1100	2000		pCi/L					
Lead-212	U	7.30	+/-10.6	13.3		pCi/L					
Lead-214	U	16.1	+/-10.3	16.6		pCi/L					
Manganese-54	U	1.54	+/-4.27	7.18		pCi/L					
Mercury-203	U	-0.063	+/-4.07	7.34		pCi/L					
Neodymium-147	U	69.1	+/-59.1	116		pCi/L					
Neptunium-239	U	5.62	+/-32.0	56.3		pCi/L					
Niobium-94	U	-2.3	+/-3.74	6.45		pCi/L					
Niobium-95	U	3.30	+/-3.99	7.99		pCi/L					
Potassium-40	U	5.55	+/-65.1	81.0		pCi/L					
Promethium-144	U	3.82	+/-3.85	7.66		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 15 Project: WNUC00129  
Sample ID: 371595007 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.492	+/-4.49	8.08	pCi/L
Radium-228	U	0.915	+/-19.8	30.5	pCi/L
Ruthenium-106	U	11.4	+/-34.2	65.2	pCi/L
Silver-110m	U	2.47	+/-3.84	7.00	pCi/L
Sodium-22	U	-2.04	+/-4.56	6.76	pCi/L
Thallium-208	U	1.84	+/-6.07	6.89	pCi/L
Thorium-230	U	1290	+/-1580	2840	pCi/L
Thorium-234	U	106	+/-322	364	pCi/L
Tin-113	U	1.67	+/-5.31	9.64	pCi/L
Uranium-235	U	-12	+/-28.4	40.6	pCi/L
Uranium-238	U	106	+/-322	364	pCi/L
Yttrium-88	U	1.65	+/-3.86	8.48	pCi/L
Zinc-65	U	0.669	+/-8.57	16.4	pCi/L
Zirconium-95	U	-0.271	+/-7.33	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.495	+/-1.35	1.91	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		165	+/-3.72	1.66	5.00	pCi/L					
Alpha		3.05	+/-1.64	2.55	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		171	+/-4.00	2.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	242	+/-135	218	300	pCi/L	MYM1	05/18/15	1320	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 15  
Sample ID: 371595007

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	371595008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:52		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.95	+/-13.9	24.5		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	6.29	+/-12.6	22.9		pCi/L					
Antimony-124	U	3.40	+/-8.85	18.0		pCi/L					
Antimony-125	U	2.59	+/-7.97	14.7		pCi/L					
Barium-133	U	4.10	+/-4.28	7.37		pCi/L					
Barium-140	U	7.38	+/-23.6	43.1		pCi/L					
Beryllium-7	U	19.3	+/-31.5	43.2		pCi/L					
Bismuth-212	U	-25.2	+/-44.4	78.3		pCi/L					
Bismuth-214	UI	0.00	+/-14.4	10.8		pCi/L					
Cerium-139	U	-3.41	+/-2.74	4.31		pCi/L					
Cerium-141	U	-1.55	+/-6.76	9.19		pCi/L					
Cerium-144	U	-2.36	+/-18.1	29.4		pCi/L					
Cesium-134	U	-4.03	+/-3.66	5.42		pCi/L					
Cesium-136	U	-5.92	+/-9.74	13.4		pCi/L					
Cesium-137	U	-1.68	+/-4.47	6.87	10.0	pCi/L					
Chromium-51	U	-5.33	+/-34.0	53.2		pCi/L					
Cobalt-56	U	3.40	+/-3.31	6.78		pCi/L					
Cobalt-57	U	-1.16	+/-2.33	3.91		pCi/L					
Cobalt-58	U	-0.266	+/-3.10	5.76		pCi/L					
Cobalt-60	U	1.78	+/-3.20	6.44		pCi/L					
Europium-152	U	-0.484	+/-8.30	14.9		pCi/L					
Europium-154	U	-1.35	+/-10.2	16.5		pCi/L					
Europium-155	U	-2.42	+/-9.23	15.8		pCi/L					
Iridium-192	U	2.59	+/-3.42	5.82		pCi/L					
Iron-59	U	3.64	+/-7.41	14.4		pCi/L					
Lead-210	U	46.4	+/-364	486		pCi/L					
Lead-212	U	5.49	+/-9.50	11.6		pCi/L					
Lead-214	U	5.41	+/-10.3	14.5		pCi/L					
Manganese-54	U	0.703	+/-3.32	6.24		pCi/L					
Mercury-203	U	-0.093	+/-3.41	6.14		pCi/L					
Neodymium-147	U	26.8	+/-48.8	90.9		pCi/L					
Neptunium-239	U	-9.16	+/-24.9	42.1		pCi/L					
Niobium-94	UI	0.00	+/-4.13	6.40		pCi/L					
Niobium-95	U	-1.39	+/-3.12	5.58		pCi/L					
Potassium-40	U	-16.5	+/-43.4	79.0		pCi/L					
Promethium-144	U	0.482	+/-4.16	4.77		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 16 Project: WNUC00129  
Sample ID: 371595008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.77	+/-3.88	7.18	pCi/L
Radium-228	U	-1.95	+/-13.9	24.5	pCi/L
Ruthenium-106	U	12.4	+/-29.6	54.4	pCi/L
Silver-110m	U	-0.0269	+/-3.05	5.39	pCi/L
Sodium-22	U	-0.477	+/-3.58	5.81	pCi/L
Thallium-208	U	1.29	+/-5.73	6.11	pCi/L
Thorium-230	U	-502	+/-995	1550	pCi/L
Thorium-234	U	-46.4	+/-134	223	pCi/L
Tin-113	U	1.89	+/-4.09	7.56	pCi/L
Uranium-235	U	20.5	+/-24.4	29.3	pCi/L
Uranium-238	U	-46.4	+/-134	223	pCi/L
Yttrium-88	U	-2.62	+/-4.07	7.00	pCi/L
Zinc-65	U	2.46	+/-10.5	12.2	pCi/L
Zirconium-95	U	2.75	+/-5.62	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.16	+/-0.894	1.38	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		14.1	+/-1.33	1.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-83.2	+/-118	211	300	pCi/L	MYM1	05/18/15	1336	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	371595009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:01		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.39	+/-18.3	30.1		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	1.80	+/-32.6	44.9		pCi/L					
Antimony-124	U	-0.973	+/-7.88	15.5		pCi/L					
Antimony-125	U	-4.81	+/-9.84	16.8		pCi/L					
Barium-133	U	0.431	+/-4.67	7.47		pCi/L					
Barium-140	U	4.03	+/-27.2	49.0		pCi/L					
Beryllium-7	U	-5.0	+/-35.8	62.7		pCi/L					
Bismuth-212	U	37.1	+/-48.0	96.9		pCi/L					
Bismuth-214	UI	0.00	+/-10.9	18.5		pCi/L					
Cerium-139	U	0.278	+/-3.50	5.96		pCi/L					
Cerium-141	U	-5.98	+/-9.35	11.9		pCi/L					
Cerium-144	U	-22.7	+/-21.2	33.9		pCi/L					
Cesium-134	U	1.54	+/-3.96	7.69		pCi/L					
Cesium-136	U	7.87	+/-9.97	20.0		pCi/L					
Cesium-137	U	1.09	+/-3.44	6.67	10.0	pCi/L					
Chromium-51	U	10.3	+/-38.2	70.1		pCi/L					
Cobalt-56	U	-2.83	+/-4.83	7.00		pCi/L					
Cobalt-57	U	0.386	+/-3.05	5.28		pCi/L					
Cobalt-58	U	-2.44	+/-3.48	5.95		pCi/L					
Cobalt-60	U	2.92	+/-3.61	7.89		pCi/L					
Europium-152	U	-7.5	+/-10.9	18.4		pCi/L					
Europium-154	U	-1.7	+/-10.2	19.6		pCi/L					
Europium-155	U	6.17	+/-11.9	21.4		pCi/L					
Iridium-192	U	0.307	+/-3.70	6.69		pCi/L					
Iron-59	U	2.74	+/-7.27	13.2		pCi/L					
Lead-210	U	319	+/-1060	1940		pCi/L					
Lead-212	U	6.98	+/-8.71	12.3		pCi/L					
Lead-214	U	8.50	+/-13.1	16.9		pCi/L					
Manganese-54	U	0.399	+/-3.62	6.80		pCi/L					
Mercury-203	U	3.70	+/-3.99	7.61		pCi/L					
Neodymium-147	U	-0.757	+/-54.3	96.7		pCi/L					
Neptunium-239	U	-9.18	+/-30.6	51.8		pCi/L					
Niobium-94	U	0.850	+/-3.26	6.24		pCi/L					
Niobium-95	U	1.24	+/-3.81	7.21		pCi/L					
Potassium-40	U	32.6	+/-64.9	82.4		pCi/L					
Promethium-144	U	-0.569	+/-3.81	6.94		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 17 Project: WNUC00129  
Sample ID: 371595009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.954	+/-3.81	6.70	pCi/L
Radium-228	U	-2.39	+/-18.3	30.1	pCi/L
Ruthenium-106	U	6.18	+/-29.7	57.0	pCi/L
Silver-110m	U	0.279	+/-3.20	6.08	pCi/L
Sodium-22	U	-0.399	+/-3.64	7.02	pCi/L
Thallium-208	U	1.79	+/-3.70	6.90	pCi/L
Thorium-230	U	1910	+/-2620	2680	pCi/L
Thorium-234	U	-48.4	+/-261	412	pCi/L
Tin-113	U	-2.66	+/-5.71	8.93	pCi/L
Uranium-235	U	-15.6	+/-32.5	39.3	pCi/L
Uranium-238	U	-48.4	+/-261	412	pCi/L
Yttrium-88	U	0.390	+/-3.74	7.69	pCi/L
Zinc-65	U	-10.2	+/-7.93	11.7	pCi/L
Zirconium-95	U	-3.87	+/-6.93	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.738	+/-1.08	1.81	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		505	+/-6.47	2.27	5.00	pCi/L					
Alpha	U	0.760	+/-1.08	1.71	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		516	+/-6.46	1.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	789	+/-151	212	300	pCi/L	MYM1	05/18/15	1353	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.1	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 371595009

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 371595010  
Matrix: Ground Water  
Collect Date: 13-APR-15 10:17  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.249	+/-17.7	29.2		pCi/L		MJH1	04/29/15	0634 1474077	1
Americium-241	U	-6.11	+/-21.2	33.0		pCi/L					
Antimony-124	U	-0.786	+/-9.72	18.7		pCi/L					
Antimony-125	U	0.168	+/-10.5	18.9		pCi/L					
Barium-133	U	-5.77	+/-5.39	9.11		pCi/L					
Barium-140	U	-23	+/-33.9	57.4		pCi/L					
Beryllium-7	U	28.1	+/-55.0	65.3		pCi/L					
Bismuth-212	U	51.7	+/-72.1	112		pCi/L					
Bismuth-214	U	12.6	+/-11.6	15.8		pCi/L					
Cerium-139	U	-1.17	+/-3.68	6.30		pCi/L					
Cerium-141	U	-0.609	+/-8.43	12.8		pCi/L					
Cerium-144	U	-5.25	+/-24.6	42.6		pCi/L					
Cesium-134	U	-0.436	+/-4.41	7.93		pCi/L					
Cesium-136	U	9.64	+/-10.5	21.5		pCi/L					
Cesium-137	U	3.27	+/-4.56	8.51	10.0	pCi/L					
Chromium-51	U	-35	+/-50.7	85.4		pCi/L					
Cobalt-56	U	-1.49	+/-5.08	9.07		pCi/L					
Cobalt-57	U	2.31	+/-3.15	5.69		pCi/L					
Cobalt-58	U	-0.222	+/-4.84	8.86		pCi/L					
Cobalt-60	U	-0.0608	+/-3.67	6.87		pCi/L					
Europium-152	U	3.67	+/-12.1	22.1		pCi/L					
Europium-154	U	2.03	+/-13.4	21.8		pCi/L					
Europium-155	U	-0.152	+/-13.4	23.5		pCi/L					
Iridium-192	U	2.36	+/-4.53	8.34		pCi/L					
Iron-59	U	-3.36	+/-8.89	13.9		pCi/L					
Lead-210	U	-491	+/-619	823		pCi/L					
Lead-212	U	5.31	+/-11.1	13.4		pCi/L					
Lead-214	U	0.597	+/-11.4	17.4		pCi/L					
Manganese-54	U	0.818	+/-4.12	7.71		pCi/L					
Mercury-203	U	1.56	+/-9.45	8.25		pCi/L					
Neodymium-147	U	-12.6	+/-71.5	126		pCi/L					
Neptunium-239	U	-38.3	+/-33.4	55.7		pCi/L					
Niobium-94	U	-0.983	+/-4.14	7.14		pCi/L					
Niobium-95	U	-0.777	+/-5.11	8.86		pCi/L					
Potassium-40	U	-19.5	+/-53.1	89.2		pCi/L					
Promethium-144	U	2.50	+/-4.15	7.67		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18 Project: WNUC00129  
Sample ID: 371595010 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	5.08	+/-5.05	9.62	pCi/L
Radium-228	U	0.249	+/-17.7	29.2	pCi/L
Ruthenium-106	U	1.89	+/-38.7	68.8	pCi/L
Silver-110m	U	-4.34	+/-4.97	6.79	pCi/L
Sodium-22	U	1.79	+/-4.52	7.74	pCi/L
Thallium-208	U	6.68	+/-8.57	7.44	pCi/L
Thorium-230	U	-385	+/-1540	2380	pCi/L
Thorium-234	U	132	+/-298	284	pCi/L
Tin-113	U	-4.78	+/-5.75	9.79	pCi/L
Uranium-235	U	-1.69	+/-30.3	42.4	pCi/L
Uranium-238	U	132	+/-298	284	pCi/L
Yttrium-88	U	-2.25	+/-3.64	6.38	pCi/L
Zinc-65	U	5.35	+/-8.05	16.0	pCi/L
Zirconium-95	U	-3.74	+/-9.07	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		9.41	+/-6.09	8.77	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		179	+/-8.49	7.78	5.00	pCi/L					
Alpha	U	11.7	+/-8.39	13.4	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		153	+/-7.85	7.16	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	93.1	+/-122	206	300	pCi/L	MYM1	05/18/15	1410	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 371595010

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 20  
Sample ID: 371595011  
Matrix: Ground Water  
Collect Date: 16-APR-15 10:05  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-9.24	+/-14.8	23.6		pCi/L		MJH1	04/29/15	0710	1474077	1
Americium-241	U	6.25	+/-11.5	18.4		pCi/L						
Antimony-124	U	8.18	+/-7.80	14.6		pCi/L						
Antimony-125	U	-2.14	+/-8.19	14.1		pCi/L						
Barium-133	U	2.07	+/-4.04	7.25		pCi/L						
Barium-140	U	6.21	+/-19.3	36.9		pCi/L						
Beryllium-7	U	30.2	+/-29.3	57.8		pCi/L						
Bismuth-212	U	-0.192	+/-40.9	75.3		pCi/L						
Bismuth-214	UI	0.00	+/-13.1	11.3		pCi/L						
Cerium-139	U	-2.08	+/-3.18	4.75		pCi/L						
Cerium-141	U	0.982	+/-5.33	9.63		pCi/L						
Cerium-144	U	-4.23	+/-17.2	30.6		pCi/L						
Cesium-134	U	-0.0997	+/-3.30	6.05		pCi/L						
Cesium-136	U	0.352	+/-7.71	14.2		pCi/L						
Cesium-137	U	0.873	+/-2.80	5.37	10.0	pCi/L						
Chromium-51	U	0.503	+/-31.0	54.9		pCi/L						
Cobalt-56	U	-2.33	+/-4.03	6.26		pCi/L						
Cobalt-57	U	-0.00738	+/-2.14	3.87		pCi/L						
Cobalt-58	U	5.02	+/-8.48	6.20		pCi/L						
Cobalt-60	U	-0.85	+/-3.54	6.52		pCi/L						
Europium-152	U	-6.71	+/-10.2	17.1		pCi/L						
Europium-154	U	2.22	+/-8.65	17.3		pCi/L						
Europium-155	U	6.55	+/-8.48	16.0		pCi/L						
Iridium-192	U	-0.627	+/-2.86	4.98		pCi/L						
Iron-59	U	1.79	+/-6.22	12.0		pCi/L						
Lead-210	U	311	+/-380	353		pCi/L						
Lead-212	U	5.47	+/-9.69	9.09		pCi/L						
Lead-214		14.7	+/-10.5	12.5		pCi/L						
Manganese-54	U	-1.43	+/-3.12	5.41		pCi/L						
Mercury-203	U	-0.937	+/-3.44	5.96		pCi/L						
Neodymium-147	U	22.2	+/-39.7	77.3		pCi/L						
Neptunium-239	U	-10.2	+/-23.2	40.9		pCi/L						
Niobium-94	U	-1.99	+/-3.57	5.23		pCi/L						
Niobium-95	U	0.273	+/-3.30	6.10		pCi/L						
Potassium-40	U	-2.04	+/-40.3	74.0		pCi/L						
Promethium-144	U	0.891	+/-3.61	5.87		pCi/L						

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	371595011	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.91	+/-4.18	6.96	pCi/L
Radium-228	U	-9.24	+/-14.8	23.6	pCi/L
Ruthenium-106	U	18.2	+/-25.9	50.9	pCi/L
Silver-110m	U	-1.45	+/-2.59	4.53	pCi/L
Sodium-22	U	1.08	+/-3.02	6.12	pCi/L
Thallium-208	U	0.641	+/-3.56	6.15	pCi/L
Thorium-230	U	542	+/-1420	1430	pCi/L
Thorium-234	U	123	+/-173	217	pCi/L
Tin-113	U	-0.667	+/-4.14	7.16	pCi/L
Uranium-235	U	-20.8	+/-20.9	31.8	pCi/L
Uranium-238	U	123	+/-173	217	pCi/L
Yttrium-88	U	0.400	+/-3.40	6.77	pCi/L
Zinc-65	U	-1.45	+/-7.56	13.3	pCi/L
Zirconium-95	U	0.332	+/-5.25	9.81	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.0909	+/-1.84	4.20	5.00	pCi/L	KXB2	05/19/15	1058	1475946	2
Beta	U	2.04	+/-2.43	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-67.1	+/-116	208	300	pCi/L	MYM1	05/18/15	1426	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 22  
Sample ID: 371595012  
Matrix: Ground Water  
Collect Date: 13-APR-15 09:58  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.4	+/-19.8	25.0		pCi/L		MJH1	04/29/15	0832 1474077	1
Americium-241	U	-8.66	+/-38.4	55.9		pCi/L					
Antimony-124	U	9.18	+/-10.7	22.9		pCi/L					
Antimony-125	U	-1.54	+/-10.9	19.1		pCi/L					
Barium-133	UI	0.00	+/-12.2	8.89		pCi/L					
Barium-140	U	-1.44	+/-32.9	58.3		pCi/L					
Beryllium-7	U	5.61	+/-38.5	69.3		pCi/L					
Bismuth-212	U	25.5	+/-67.1	108		pCi/L					
Bismuth-214	U	6.07	+/-13.2	13.7		pCi/L					
Cerium-139	U	-0.40	+/-3.50	6.18		pCi/L					
Cerium-141	U	-8.54	+/-8.90	13.2		pCi/L					
Cerium-144	U	-14.8	+/-24.0	41.4		pCi/L					
Cesium-134	U	2.16	+/-4.42	8.29		pCi/L					
Cesium-136	U	6.80	+/-10.6	21.4		pCi/L					
Cesium-137	U	-2.56	+/-3.85	6.42	10.0	pCi/L					
Chromium-51	U	-33.4	+/-47.4	80.2		pCi/L					
Cobalt-56	U	1.20	+/-3.85	7.48		pCi/L					
Cobalt-57	U	-0.846	+/-4.13	5.55		pCi/L					
Cobalt-58	U	-0.204	+/-4.31	7.68		pCi/L					
Cobalt-60	U	-0.277	+/-4.05	7.61		pCi/L					
Europium-152	U	1.94	+/-12.6	20.5		pCi/L					
Europium-154	U	0.424	+/-11.5	21.8		pCi/L					
Europium-155	U	2.43	+/-14.8	24.3		pCi/L					
Iridium-192	U	0.257	+/-4.76	7.56		pCi/L					
Iron-59	UI	0.00	+/-13.5	17.1		pCi/L					
Lead-210	U	-1380	+/-1310	1920		pCi/L					
Lead-212	U	-7.69	+/-9.72	13.4		pCi/L					
Lead-214	U	4.41	+/-10.7	17.2		pCi/L					
Manganese-54	U	-2.28	+/-3.70	6.50		pCi/L					
Mercury-203	U	1.56	+/-4.41	7.98		pCi/L					
Neodymium-147	U	-41.6	+/-65.8	111		pCi/L					
Neptunium-239	U	3.91	+/-34.9	62.4		pCi/L					
Niobium-94	U	-0.0113	+/-3.91	6.94		pCi/L					
Niobium-95	U	2.20	+/-4.41	8.27		pCi/L					
Potassium-40	U	-50.4	+/-56.6	99.5		pCi/L					
Promethium-144	U	-4.34	+/-4.31	6.92		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 22 Project: WNUC00129  
Sample ID: 371595012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.16	+/-5.36	9.28	pCi/L
Radium-228	U	11.4	+/-19.8	25.0	pCi/L
Ruthenium-106	U	-7.39	+/-34.4	60.2	pCi/L
Silver-110m	U	-0.436	+/-3.68	6.51	pCi/L
Sodium-22	U	-0.229	+/-4.08	7.66	pCi/L
Thallium-208	U	-4.3	+/-5.90	8.22	pCi/L
Thorium-230	U	2660	+/-2890	3540	pCi/L
Thorium-234	U	4.48	+/-342	405	pCi/L
Tin-113	U	3.98	+/-5.21	9.74	pCi/L
Uranium-235	U	-22.4	+/-28.0	42.0	pCi/L
Uranium-238	U	4.48	+/-342	405	pCi/L
Yttrium-88	U	2.38	+/-4.73	9.83	pCi/L
Zinc-65	U	-7.84	+/-8.56	14.4	pCi/L
Zirconium-95	U	3.80	+/-8.38	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.10	+/-3.49	4.97	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta		37.4	+/-4.43	4.59	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.10	+/-121	211	300	pCi/L	MYM1	05/18/15	1443	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371595013  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:13  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.682	+/-17.2	30.2		pCi/L		MJH1	04/29/15	0846 1474077	1
Americium-241	U	-31.6	+/-25.6	38.9		pCi/L					
Antimony-124	U	3.32	+/-10.2	20.3		pCi/L					
Antimony-125	U	-5.76	+/-10.8	18.2		pCi/L					
Barium-133	U	-9.91	+/-5.20	8.06		pCi/L					
Barium-140	U	21.5	+/-31.7	53.3		pCi/L					
Beryllium-7	U	-3.29	+/-40.8	70.7		pCi/L					
Bismuth-212	U	-6.66	+/-55.3	98.3		pCi/L					
Bismuth-214	U	0.331	+/-10.5	17.9		pCi/L					
Cerium-139	U	3.71	+/-4.06	6.65		pCi/L					
Cerium-141	U	0.150	+/-10.6	12.7		pCi/L					
Cerium-144	U	-14.2	+/-29.5	43.0		pCi/L					
Cesium-134	U	-3.92	+/-5.02	7.52		pCi/L					
Cesium-136	U	-1.36	+/-11.1	20.2		pCi/L					
Cesium-137	U	3.90	+/-4.19	8.08	10.0	pCi/L					
Chromium-51	U	-16.3	+/-45.4	78.4		pCi/L					
Cobalt-56	U	3.88	+/-5.07	9.52		pCi/L					
Cobalt-57	U	1.17	+/-3.18	5.63		pCi/L					
Cobalt-58	U	-1.51	+/-4.23	7.33		pCi/L					
Cobalt-60	U	2.93	+/-4.51	8.52		pCi/L					
Europium-152	U	0.192	+/-12.1	21.4		pCi/L					
Europium-154	U	8.66	+/-10.4	21.4		pCi/L					
Europium-155	U	-7.87	+/-13.3	22.7		pCi/L					
Iridium-192	U	-2.42	+/-4.34	7.42		pCi/L					
Iron-59	U	-3.27	+/-9.28	16.4		pCi/L					
Lead-210	U	-204	+/-639	975		pCi/L					
Lead-212	U	7.62	+/-11.6	13.5		pCi/L					
Lead-214	U	8.84	+/-10.4	17.8		pCi/L					
Manganese-54	U	-0.17	+/-4.19	7.44		pCi/L					
Mercury-203	U	-3.94	+/-5.32	7.84		pCi/L					
Neodymium-147	U	-92.8	+/-66.8	100		pCi/L					
Neptunium-239	U	-36	+/-33.5	55.7		pCi/L					
Niobium-94	U	1.09	+/-4.25	7.69		pCi/L					
Niobium-95	U	1.46	+/-4.32	7.99		pCi/L					
Potassium-40	U	3.68	+/-50.2	97.7		pCi/L					
Promethium-144	U	0.645	+/-4.29	7.71		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371595013

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.801	+/-5.93	8.99	pCi/L
Radium-228	U	-0.682	+/-17.2	30.2	pCi/L
Ruthenium-106	U	-18.9	+/-36.2	62.5	pCi/L
Silver-110m	U	-2.4	+/-4.15	7.10	pCi/L
Sodium-22	U	2.76	+/-3.71	7.56	pCi/L
Thallium-208	U	4.97	+/-6.40	6.69	pCi/L
Thorium-230	U	-1270	+/-1510	2580	pCi/L
Thorium-234	U	-31.7	+/-219	344	pCi/L
Tin-113	U	6.42	+/-5.45	10.3	pCi/L
Uranium-235	U	0.480	+/-34.0	38.7	pCi/L
Uranium-238	U	-31.7	+/-219	344	pCi/L
Yttrium-88	U	3.26	+/-4.17	9.02	pCi/L
Zinc-65	U	4.81	+/-10.3	18.2	pCi/L
Zirconium-95	U	2.87	+/-7.63	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.18	+/-2.27	4.21	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta	U	0.462	+/-2.07	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-66.6	+/-119	213	300	pCi/L	MYM1	05/18/15	1459	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371595014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 08:26		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.58	+/-17.5	25.4		pCi/L		MJH1	04/29/15	0833 1474077	1
Americium-241	UI	0.00	+/-17.8	16.6		pCi/L					
Antimony-124	U	1.21	+/-8.04	15.6		pCi/L					
Antimony-125	U	2.58	+/-8.30	15.0		pCi/L					
Barium-133	U	3.15	+/-5.36	8.21		pCi/L					
Barium-140	U	20.4	+/-25.2	48.8		pCi/L					
Beryllium-7	U	-3.08	+/-31.2	54.1		pCi/L					
Bismuth-212	U	-23.5	+/-51.3	81.1		pCi/L					
Bismuth-214	U	8.39	+/-12.3	15.6		pCi/L					
Cerium-139	U	-1.57	+/-2.79	4.57		pCi/L					
Cerium-141	U	-1.83	+/-7.34	10.2		pCi/L					
Cerium-144	U	-2.14	+/-17.3	29.5		pCi/L					
Cesium-134	U	1.04	+/-3.36	6.00		pCi/L					
Cesium-136	U	-5.61	+/-8.87	14.8		pCi/L					
Cesium-137	U	0.0256	+/-3.25	5.94	10.0	pCi/L					
Chromium-51	U	-16.3	+/-44.1	62.8		pCi/L					
Cobalt-56	U	-1.05	+/-3.56	6.25		pCi/L					
Cobalt-57	U	-0.129	+/-2.30	3.94		pCi/L					
Cobalt-58	U	-2.33	+/-3.93	6.27		pCi/L					
Cobalt-60	U	-1.35	+/-3.51	6.25		pCi/L					
Europium-152	U	7.86	+/-9.06	16.9		pCi/L					
Europium-154	U	-2.11	+/-9.23	16.9		pCi/L					
Europium-155	U	-0.376	+/-9.28	16.0		pCi/L					
Iridium-192	U	-2.18	+/-3.30	5.62		pCi/L					
Iron-59	U	-1.76	+/-6.64	11.9		pCi/L					
Lead-210	U	187	+/-325	296		pCi/L					
Lead-212	U	5.41	+/-8.40	9.56		pCi/L					
Lead-214		17.5	+/-11.1	14.8		pCi/L					
Manganese-54	U	-0.222	+/-3.10	5.58		pCi/L					
Mercury-203	U	0.937	+/-3.56	6.43		pCi/L					
Neodymium-147	U	-16.8	+/-53.5	90.7		pCi/L					
Neptunium-239	U	-4.49	+/-24.4	41.6		pCi/L					
Niobium-94	U	3.42	+/-2.83	5.66		pCi/L					
Niobium-95	U	1.75	+/-3.89	6.72		pCi/L					
Potassium-40	U	11.6	+/-70.6	72.1		pCi/L					
Promethium-144	U	-0.129	+/-3.06	5.55		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371595014	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0456	+/-4.08	7.13	pCi/L
Radium-228	U	8.58	+/-17.5	25.4	pCi/L
Ruthenium-106	U	6.33	+/-31.4	57.9	pCi/L
Silver-110m	U	-1.25	+/-2.97	5.24	pCi/L
Sodium-22	U	-0.70	+/-3.26	5.98	pCi/L
Thallium-208	U	2.64	+/-4.51	5.45	pCi/L
Thorium-230	U	-379	+/-856	1330	pCi/L
Thorium-234	U	69.0	+/-149	192	pCi/L
Tin-113	U	-4.34	+/-4.19	6.84	pCi/L
Uranium-235	U	-2.15	+/-23.5	33.1	pCi/L
Uranium-238	U	69.0	+/-149	192	pCi/L
Yttrium-88	U	1.50	+/-4.83	8.44	pCi/L
Zinc-65	U	-11.7	+/-6.82	10.3	pCi/L
Zirconium-95	U	-0.954	+/-6.26	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.763	+/-1.78	3.34	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta		13.0	+/-3.58	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-118	+/-118	215	300	pCi/L	MYM1	05/18/15	1516	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	371595015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.99	+/-20.7	27.4		pCi/L		MJH1	04/29/15	0834 1474077	1
Americium-241	U	3.47	+/-17.6	28.1		pCi/L					
Antimony-124	U	-0.684	+/-8.16	15.9		pCi/L					
Antimony-125	U	5.78	+/-12.1	15.1		pCi/L					
Barium-133	U	-0.373	+/-4.18	6.57		pCi/L					
Barium-140	U	7.78	+/-31.7	57.8		pCi/L					
Beryllium-7	U	8.35	+/-33.9	61.4		pCi/L					
Bismuth-212	U	33.7	+/-46.9	88.1		pCi/L					
Bismuth-214	U	-1.72	+/-8.96	14.0		pCi/L					
Cerium-139	U	-2.96	+/-3.30	5.35		pCi/L					
Cerium-141	U	0.821	+/-8.73	12.2		pCi/L					
Cerium-144	U	-13.6	+/-20.8	34.4		pCi/L					
Cesium-134	U	-0.486	+/-3.53	6.49		pCi/L					
Cesium-136	U	-0.65	+/-11.0	20.4		pCi/L					
Cesium-137	U	0.754	+/-3.07	5.60	10.0	pCi/L					
Chromium-51	U	-34.7	+/-46.1	68.3		pCi/L					
Cobalt-56	U	-0.838	+/-3.66	6.67		pCi/L					
Cobalt-57	U	-1.02	+/-2.72	4.59		pCi/L					
Cobalt-58	U	-1.03	+/-3.25	5.91		pCi/L					
Cobalt-60	U	3.39	+/-2.03	5.91		pCi/L					
Europium-152	U	-1.82	+/-8.83	15.7		pCi/L					
Europium-154	U	-3.92	+/-8.72	15.3		pCi/L					
Europium-155	U	1.79	+/-10.8	18.9		pCi/L					
Iridium-192	U	2.43	+/-4.40	6.61		pCi/L					
Iron-59	U	0.294	+/-7.01	13.2		pCi/L					
Lead-210	U	241	+/-632	760		pCi/L					
Lead-212	U	10.7	+/-10.6	11.7		pCi/L					
Lead-214	UI	0.00	+/-13.6	13.9		pCi/L					
Manganese-54	U	0.295	+/-2.86	5.41		pCi/L					
Mercury-203	U	4.05	+/-4.72	6.22		pCi/L					
Neodymium-147	U	-3.42	+/-67.9	121		pCi/L					
Neptunium-239	U	16.2	+/-28.0	49.5		pCi/L					
Niobium-94	U	2.69	+/-3.02	5.76		pCi/L					
Niobium-95	U	2.20	+/-3.51	6.91		pCi/L					
Potassium-40	U	-42.5	+/-44.3	82.0		pCi/L					
Promethium-144	U	1.35	+/-3.24	5.92		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 26 Project: WNUC00129  
Sample ID: 371595015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.627	+/-3.94	6.96	pCi/L
Radium-228	U	5.99	+/-20.7	27.4	pCi/L
Ruthenium-106	U	1.91	+/-30.2	53.7	pCi/L
Silver-110m	U	0.583	+/-4.09	5.47	pCi/L
Sodium-22	U	-1.47	+/-3.07	5.38	pCi/L
Thallium-208	U	-1.38	+/-4.29	6.80	pCi/L
Thorium-230	U	615	+/-1390	1750	pCi/L
Thorium-234	U	21.3	+/-224	289	pCi/L
Tin-113	U	-0.278	+/-4.38	7.82	pCi/L
Uranium-235	U	5.23	+/-26.6	36.0	pCi/L
Uranium-238	U	21.3	+/-224	289	pCi/L
Yttrium-88	U	1.21	+/-3.17	6.78	pCi/L
Zinc-65	U	-4.94	+/-7.59	13.0	pCi/L
Zirconium-95	U	1.96	+/-6.47	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.569	+/-2.29	4.57	5.00	pCi/L	KXB2	05/19/15	1100	1475946	2
Beta	U	-0.492	+/-2.36	4.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	38.7	+/-98.8	170	300	pCi/L	MYM1	05/18/15	1012	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	371595016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.06	+/-15.9	28.7		pCi/L		MJH1	04/29/15	0834 1474077	1
Americium-241	U	4.21	+/-14.5	23.5		pCi/L					
Antimony-124	U	4.07	+/-7.81	16.5		pCi/L					
Antimony-125	U	-0.418	+/-8.21	14.6		pCi/L					
Barium-133	U	3.77	+/-3.96	6.89		pCi/L					
Barium-140	U	-16	+/-22.6	37.5		pCi/L					
Beryllium-7	U	28.1	+/-27.4	53.3		pCi/L					
Bismuth-212	U	42.1	+/-43.1	74.4		pCi/L					
Bismuth-214		13.3	+/-11.2	11.3		pCi/L					
Cerium-139	U	-1.04	+/-2.77	4.62		pCi/L					
Cerium-141	U	-4.81	+/-6.16	8.77		pCi/L					
Cerium-144	U	-4.37	+/-18.7	31.7		pCi/L					
Cesium-134	U	-3.25	+/-4.07	6.43		pCi/L					
Cesium-136	U	-2.51	+/-9.38	13.3		pCi/L					
Cesium-137	U	-2.4	+/-4.44	6.70	10.0	pCi/L					
Chromium-51	U	-18.7	+/-32.1	55.6		pCi/L					
Cobalt-56	U	-1.52	+/-3.87	5.87		pCi/L					
Cobalt-57	U	1.22	+/-2.38	4.23		pCi/L					
Cobalt-58	U	-0.608	+/-3.17	5.80		pCi/L					
Cobalt-60	U	-2.33	+/-3.39	5.62		pCi/L					
Europium-152	U	4.35	+/-9.30	17.2		pCi/L					
Europium-154	U	-1.33	+/-10.2	16.5		pCi/L					
Europium-155	U	0.490	+/-9.56	16.7		pCi/L					
Iridium-192	U	1.53	+/-3.21	5.94		pCi/L					
Iron-59	U	-0.946	+/-6.11	11.2		pCi/L					
Lead-210	U	-206	+/-293	434		pCi/L					
Lead-212	U	0.337	+/-8.34	10.1		pCi/L					
Lead-214	U	12.1	+/-12.0	15.7		pCi/L					
Manganese-54	U	2.86	+/-2.94	6.00		pCi/L					
Mercury-203	U	3.00	+/-3.20	6.11		pCi/L					
Neodymium-147	U	-39	+/-43.5	70.8		pCi/L					
Neptunium-239	U	30.9	+/-25.4	46.6		pCi/L					
Niobium-94	U	2.19	+/-2.95	5.59		pCi/L					
Niobium-95	U	0.966	+/-3.57	6.76		pCi/L					
Potassium-40	U	-13.9	+/-47.4	86.6		pCi/L					
Promethium-144	U	-0.903	+/-3.15	5.70		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 27 Project: WNUC00129  
Sample ID: 371595016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.24	+/-4.11	7.75	pCi/L
Radium-228	U	3.06	+/-15.9	28.7	pCi/L
Ruthenium-106	U	4.99	+/-31.9	50.4	pCi/L
Silver-110m	U	-2.88	+/-3.18	5.06	pCi/L
Sodium-22	U	-0.367	+/-3.60	5.86	pCi/L
Thallium-208	U	0.470	+/-4.89	4.80	pCi/L
Thorium-230	U	-380	+/-1040	1570	pCi/L
Thorium-234	U	6.61	+/-200	190	pCi/L
Tin-113	U	-0.693	+/-4.12	7.28	pCi/L
Uranium-235	U	-0.067	+/-20.7	31.3	pCi/L
Uranium-238	U	6.61	+/-200	190	pCi/L
Yttrium-88	U	-3.41	+/-3.90	6.39	pCi/L
Zinc-65	U	-5.89	+/-7.17	11.9	pCi/L
Zirconium-95	U	2.79	+/-6.26	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.42	+/-3.16	4.78	5.00	pCi/L	KXB2	05/19/15	1058	1475946	2
Beta		16.1	+/-3.83	3.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.9	+/-97.6	170	300	pCi/L	MYM1	05/18/15	1029	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 28  
Sample ID: 371595017  
Matrix: Ground Water  
Collect Date: 13-APR-15 10:40  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.01	+/-16.0	25.5		pCi/L		MJH1	04/29/15	0846 1474077	1
Americium-241	U	1.05	+/-16.4	26.2		pCi/L					
Antimony-124	U	4.82	+/-9.21	19.0		pCi/L					
Antimony-125	U	13.6	+/-11.6	14.6		pCi/L					
Barium-133	U	-5.76	+/-4.40	7.09		pCi/L					
Barium-140	U	-8.96	+/-24.7	42.0		pCi/L					
Beryllium-7	U	16.6	+/-30.7	57.0		pCi/L					
Bismuth-212	U	61.8	+/-48.7	98.8		pCi/L					
Bismuth-214	U	1.62	+/-13.1	15.7		pCi/L					
Cerium-139	U	-2.21	+/-3.18	5.19		pCi/L					
Cerium-141	U	-4.64	+/-7.74	11.1		pCi/L					
Cerium-144	U	-14.3	+/-21.1	34.8		pCi/L					
Cesium-134	U	0.028	+/-4.09	6.53		pCi/L					
Cesium-136	U	-0.461	+/-10.2	18.4		pCi/L					
Cesium-137	U	-0.864	+/-4.62	8.19	10.0	pCi/L					
Chromium-51	U	-33.7	+/-39.4	66.3		pCi/L					
Cobalt-56	U	0.598	+/-4.09	7.52		pCi/L					
Cobalt-57	U	-3.4	+/-2.57	4.09		pCi/L					
Cobalt-58	U	-2.59	+/-3.08	5.12		pCi/L					
Cobalt-60	U	-3.12	+/-3.50	5.80		pCi/L					
Europium-152	U	-4.4	+/-10.0	17.3		pCi/L					
Europium-154	U	-2.35	+/-9.51	17.6		pCi/L					
Europium-155	U	8.64	+/-10.2	18.5		pCi/L					
Iridium-192	U	1.42	+/-3.49	6.39		pCi/L					
Iron-59	U	2.19	+/-7.39	14.6		pCi/L					
Lead-210	U	78.7	+/-536	561		pCi/L					
Lead-212	U	-2.83	+/-7.73	11.7		pCi/L					
Lead-214	U	-9.25	+/-9.66	14.3		pCi/L					
Manganese-54	U	-2.62	+/-3.31	5.54		pCi/L					
Mercury-203	U	0.466	+/-4.11	6.55		pCi/L					
Neodymium-147	U	34.1	+/-54.3	102		pCi/L					
Neptunium-239	U	-18.4	+/-30.6	45.0		pCi/L					
Niobium-94	U	-0.777	+/-3.31	5.92		pCi/L					
Niobium-95	U	4.94	+/-4.06	7.57		pCi/L					
Potassium-40	U	1.81	+/-52.0	92.2		pCi/L					
Promethium-144	U	1.24	+/-3.49	6.55		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 28 Project: WNUC00129  
Sample ID: 371595017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.10	+/-4.67	7.77	pCi/L
Radium-228	U	-8.01	+/-16.0	25.5	pCi/L
Ruthenium-106	U	-10.9	+/-28.8	51.5	pCi/L
Silver-110m	U	-6.06	+/-3.73	5.88	pCi/L
Sodium-22	U	-0.579	+/-3.32	6.20	pCi/L
Thallium-208	U	0.445	+/-5.19	5.80	pCi/L
Thorium-230	UI	0.00	+/-1330	1600	pCi/L
Thorium-234	U	116	+/-157	273	pCi/L
Tin-113	U	0.483	+/-4.10	7.39	pCi/L
Uranium-235	U	-11	+/-25.7	35.5	pCi/L
Uranium-238	U	116	+/-157	273	pCi/L
Yttrium-88	U	0.420	+/-3.29	6.87	pCi/L
Zinc-65	U	-1.76	+/-7.18	13.3	pCi/L
Zirconium-95	U	1.37	+/-6.75	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.15	+/-5.29	9.08	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		33.9	+/-3.73	4.93	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	82.5	+/-98.6	166	300	pCi/L	MYM1	05/18/15	1045	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	371595018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:19		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.7	+/-25.8	37.3		pCi/L		MJH1	04/29/15	0850 1474077	1
Americium-241	U	6.32	+/-5.67	10.9		pCi/L					
Antimony-124	U	1.98	+/-11.9	24.0		pCi/L					
Antimony-125	U	5.43	+/-10.2	19.4		pCi/L					
Barium-133	U	3.93	+/-4.97	8.69		pCi/L					
Barium-140	U	-27.2	+/-35.0	58.1		pCi/L					
Beryllium-7	U	15.4	+/-47.1	77.0		pCi/L					
Bismuth-212	U	37.3	+/-72.6	118		pCi/L					
Bismuth-214	UI	0.00	+/-15.5	21.3		pCi/L					
Cerium-139	U	1.08	+/-2.95	5.29		pCi/L					
Cerium-141	U	-3.12	+/-7.04	10.3		pCi/L					
Cerium-144	U	-11.6	+/-18.8	32.2		pCi/L					
Cesium-134	U	1.66	+/-4.47	7.94		pCi/L					
Cesium-136	U	2.58	+/-14.1	23.6		pCi/L					
Cesium-137	U	5.47	+/-4.32	9.10	10.0	pCi/L					
Chromium-51	U	-22.8	+/-41.1	72.3		pCi/L					
Cobalt-56	U	1.85	+/-5.10	9.85		pCi/L					
Cobalt-57	U	-1.58	+/-2.21	3.77		pCi/L					
Cobalt-58	U	-3.19	+/-4.69	8.11		pCi/L					
Cobalt-60	U	1.30	+/-4.99	9.95		pCi/L					
Europium-152	U	-5.05	+/-12.3	19.0		pCi/L					
Europium-154	U	8.29	+/-13.3	27.9		pCi/L					
Europium-155	U	-2.33	+/-8.11	14.4		pCi/L					
Iridium-192	U	-1.1	+/-3.89	6.98		pCi/L					
Iron-59	U	-0.57	+/-11.3	20.7		pCi/L					
Lead-210	U	88.1	+/-126	97.1		pCi/L					
Lead-212	U	3.87	+/-9.04	13.7		pCi/L					
Lead-214	U	11.4	+/-11.6	18.3		pCi/L					
Manganese-54	U	-2.93	+/-3.99	6.83		pCi/L					
Mercury-203	U	1.41	+/-4.37	7.67		pCi/L					
Neodymium-147	U	-12.2	+/-78.4	138		pCi/L					
Neptunium-239	U	-1.15	+/-23.8	42.3		pCi/L					
Niobium-94	U	-2.58	+/-3.99	7.02		pCi/L					
Niobium-95	U	2.48	+/-4.99	9.76		pCi/L					
Potassium-40	U	-33.6	+/-60.1	109		pCi/L					
Promethium-144	U	1.20	+/-5.99	7.72		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 29 Project: WNUC00129  
Sample ID: 371595018 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.15	+/-6.41	9.10	pCi/L
Radium-228	U	-2.7	+/-25.8	37.3	pCi/L
Ruthenium-106	U	-16.5	+/-40.6	69.3	pCi/L
Silver-110m	U	-2.25	+/-4.78	6.87	pCi/L
Sodium-22	U	3.09	+/-4.73	9.93	pCi/L
Thallium-208	U	-0.798	+/-6.64	10.2	pCi/L
Thorium-230	U	8.46	+/-588	976	pCi/L
Thorium-234	U	-70.1	+/-71.8	131	pCi/L
Tin-113	U	-2.58	+/-4.66	8.12	pCi/L
Uranium-235	U	-12	+/-22.3	32.7	pCi/L
Uranium-238	U	-70.1	+/-71.8	131	pCi/L
Yttrium-88	U	-0.104	+/-4.65	9.31	pCi/L
Zinc-65	U	7.77	+/-10.1	18.8	pCi/L
Zirconium-95	U	0.573	+/-7.12	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.36	+/-3.50	4.68	5.00	pCi/L	KXB2	05/16/15	1335	1475947	2
Beta	10.2	+/-3.20	4.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-5.7	+/-94.8	168	300	pCi/L	MYM1	05/18/15	1102	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 371595019  
Matrix: Ground Water  
Collect Date: 13-APR-15 09:38  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-19.2	+/-17.1	23.9		pCi/L		MJH1	04/29/15	0847 1474077	1
Americium-241	U	8.67	+/-19.3	34.6		pCi/L					
Antimony-124	U	-6.8	+/-8.43	14.3		pCi/L					
Antimony-125	U	-6.51	+/-9.40	15.4		pCi/L					
Barium-133	U	-4.98	+/-4.46	7.15		pCi/L					
Barium-140	U	8.00	+/-23.8	45.0		pCi/L					
Beryllium-7	U	5.40	+/-29.7	55.2		pCi/L					
Bismuth-212	U	54.7	+/-42.6	87.1		pCi/L					
Bismuth-214		13.1	+/-8.53	12.8		pCi/L					
Cerium-139	U	0.181	+/-2.89	5.19		pCi/L					
Cerium-141	U	1.85	+/-9.81	10.5		pCi/L					
Cerium-144	U	-7.47	+/-19.9	34.2		pCi/L					
Cesium-134	U	0.0907	+/-3.71	6.69		pCi/L					
Cesium-136	U	-1.28	+/-10.2	18.7		pCi/L					
Cesium-137	U	-4.22	+/-4.81	7.38	10.0	pCi/L					
Chromium-51	U	-7.67	+/-38.3	66.3		pCi/L					
Cobalt-56	U	-0.755	+/-3.71	6.52		pCi/L					
Cobalt-57	U	-0.0267	+/-2.65	4.48		pCi/L					
Cobalt-58	U	-0.643	+/-3.57	6.32		pCi/L					
Cobalt-60	U	0.264	+/-3.41	6.47		pCi/L					
Europium-152	U	-5.83	+/-10.1	16.9		pCi/L					
Europium-154	U	-15.7	+/-10.7	14.3		pCi/L					
Europium-155	U	-3.63	+/-11.1	18.6		pCi/L					
Iridium-192	U	-1.86	+/-3.44	5.82		pCi/L					
Iron-59	U	-2.61	+/-6.93	12.5		pCi/L					
Lead-210	U	203	+/-1250	1080		pCi/L					
Lead-212	U	2.18	+/-10.0	11.3		pCi/L					
Lead-214	U	-4.56	+/-9.74	15.1		pCi/L					
Manganese-54	U	-2.17	+/-3.46	5.80		pCi/L					
Mercury-203	U	-1.34	+/-3.76	6.47		pCi/L					
Neodymium-147	U	5.44	+/-51.7	95.8		pCi/L					
Neptunium-239	U	-21	+/-28.7	46.5		pCi/L					
Niobium-94	U	2.69	+/-3.42	5.90		pCi/L					
Niobium-95	U	2.20	+/-4.24	7.09		pCi/L					
Potassium-40	U	52.6	+/-33.7	60.1		pCi/L					
Promethium-144	U	-0.0356	+/-4.37	6.30		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30 Project: WNUC00129  
Sample ID: 371595019 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.831	+/-3.95	7.35	pCi/L
Radium-228	U	-19.2	+/-17.1	23.9	pCi/L
Ruthenium-106	U	0.514	+/-34.3	54.1	pCi/L
Silver-110m	U	-5.2	+/-3.58	5.63	pCi/L
Sodium-22	U	-5.75	+/-3.84	5.08	pCi/L
Thallium-208	U	2.08	+/-5.34	6.28	pCi/L
Thorium-230	U	-481	+/-1320	2230	pCi/L
Thorium-234	U	-79.9	+/-197	329	pCi/L
Tin-113	U	-0.206	+/-4.29	7.47	pCi/L
Uranium-235	U	5.78	+/-30.7	38.1	pCi/L
Uranium-238	U	-79.9	+/-197	329	pCi/L
Yttrium-88	U	1.41	+/-4.32	8.69	pCi/L
Zinc-65	U	1.33	+/-7.15	13.6	pCi/L
Zirconium-95	U	-2.31	+/-6.78	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	23.0	+/-6.01	4.87	5.00	pCi/L	KXB2	05/16/15	1335	1475947	2
Beta	36.0	+/-4.48	3.52	5.00	pCi/L					
Alpha	24.3	+/-5.92	4.93	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta	35.1	+/-4.24	3.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.93	+/-93.1	163	300	pCi/L	MYM1	05/18/15	1118	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 371595019

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 371595020  
Matrix: Ground Water  
Collect Date: 13-APR-15 12:03  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.75	+/-16.3	25.2		pCi/L		MJH1	04/29/15	0847 1474077	1
Americium-241	U	-3.07	+/-29.5	48.8		pCi/L					
Antimony-124	U	10.0	+/-12.3	26.1		pCi/L					
Antimony-125	U	-5.87	+/-9.03	15.2		pCi/L					
Barium-133	U	-1.05	+/-5.32	8.17		pCi/L					
Barium-140	U	14.6	+/-29.2	54.6		pCi/L					
Beryllium-7	U	-6.14	+/-32.6	57.2		pCi/L					
Bismuth-212	U	-6.44	+/-52.3	83.8		pCi/L					
Bismuth-214		13.6	+/-9.60	12.3		pCi/L					
Cerium-139	U	-0.785	+/-3.41	5.71		pCi/L					
Cerium-141	U	-8.5	+/-9.50	11.7		pCi/L					
Cerium-144	U	-4.9	+/-22.3	37.7		pCi/L					
Cesium-134	U	0.779	+/-4.39	7.33		pCi/L					
Cesium-136	U	5.65	+/-9.59	19.6		pCi/L					
Cesium-137	U	-0.507	+/-3.84	7.07	10.0	pCi/L					
Chromium-51	U	20.4	+/-39.8	74.2		pCi/L					
Cobalt-56	U	-0.332	+/-3.94	7.27		pCi/L					
Cobalt-57	U	0.597	+/-2.95	5.14		pCi/L					
Cobalt-58	U	0.0896	+/-4.31	7.99		pCi/L					
Cobalt-60	U	0.0184	+/-3.66	7.18		pCi/L					
Europium-152	U	0.279	+/-9.97	18.0		pCi/L					
Europium-154	U	0.647	+/-9.73	19.4		pCi/L					
Europium-155	U	-1.18	+/-12.1	20.8		pCi/L					
Iridium-192	U	0.473	+/-3.89	7.03		pCi/L					
Iron-59	U	-3.89	+/-8.81	15.3		pCi/L					
Lead-210	U	322	+/-1120	2030		pCi/L					
Lead-212	U	5.53	+/-9.61	13.3		pCi/L					
Lead-214	U	2.37	+/-13.9	16.9		pCi/L					
Manganese-54	U	-3.21	+/-3.86	6.47		pCi/L					
Mercury-203	U	2.03	+/-4.10	7.61		pCi/L					
Neodymium-147	U	-23.2	+/-56.9	97.4		pCi/L					
Neptunium-239	U	27.0	+/-31.8	57.5		pCi/L					
Niobium-94	U	-2.07	+/-3.38	5.90		pCi/L					
Niobium-95	U	0.234	+/-3.79	7.14		pCi/L					
Potassium-40	U	-25.4	+/-58.9	101		pCi/L					
Promethium-144	U	2.08	+/-3.48	6.83		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 32 Project: WNUC00129  
Sample ID: 371595020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.192	+/-4.46	7.93	pCi/L
Radium-228	U	-6.75	+/-16.3	25.2	pCi/L
Ruthenium-106	U	8.28	+/-33.2	63.4	pCi/L
Silver-110m	U	1.29	+/-3.51	6.78	pCi/L
Sodium-22	U	0.362	+/-3.46	6.93	pCi/L
Thallium-208	U	2.72	+/-4.08	7.65	pCi/L
Thorium-230	U	1520	+/-2250	2780	pCi/L
Thorium-234	U	-72.1	+/-262	393	pCi/L
Tin-113	U	-4.28	+/-5.63	8.51	pCi/L
Uranium-235	U	-12.4	+/-29.8	38.1	pCi/L
Uranium-238	U	-72.1	+/-262	393	pCi/L
Yttrium-88	U	-0.19	+/-4.79	9.21	pCi/L
Zinc-65	U	-5.4	+/-8.47	14.2	pCi/L
Zirconium-95	U	0.807	+/-7.44	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		3.52	+/-1.97	2.99	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		189	+/-4.12	2.29	5.00	pCi/L					
Alpha	U	2.52	+/-3.11	4.97	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta		211	+/-9.05	3.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99		277	+/-111	172	300	pCi/L	MYM1	05/18/15	1135	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.3	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 371595020

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 33  
Sample ID: 371595021  
Matrix: Ground Water  
Collect Date: 14-APR-15 10:10  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-14.7	+/-14.1	21.2		pCi/L		MJH1	04/29/15	1113 1474078	1
Americium-241	U	13.0	+/-12.2	20.1		pCi/L					
Antimony-124	U	8.18	+/-5.00	14.0		pCi/L					
Antimony-125	U	1.95	+/-8.06	14.5		pCi/L					
Barium-133	U	-0.197	+/-5.48	8.20		pCi/L					
Barium-140	U	6.15	+/-21.4	40.8		pCi/L					
Beryllium-7	U	2.04	+/-27.6	51.4		pCi/L					
Bismuth-212	U	36.5	+/-29.4	71.3		pCi/L					
Bismuth-214		13.7	+/-10.6	10.9		pCi/L					
Cerium-139	U	1.72	+/-2.56	4.74		pCi/L					
Cerium-141	U	-1.24	+/-5.72	10.1		pCi/L					
Cerium-144	U	-5.43	+/-19.2	29.8		pCi/L					
Cesium-134	U	0.635	+/-3.30	6.19		pCi/L					
Cesium-136	U	2.97	+/-8.30	14.4		pCi/L					
Cesium-137	U	0.781	+/-3.19	5.99	10.0	pCi/L					
Chromium-51	U	-29.9	+/-37.6	62.4		pCi/L					
Cobalt-56	U	-2.76	+/-4.12	6.31		pCi/L					
Cobalt-57	U	-1.28	+/-2.32	4.07		pCi/L					
Cobalt-58	U	1.26	+/-3.08	5.95		pCi/L					
Cobalt-60	U	-2.16	+/-3.02	5.21		pCi/L					
Europium-152	U	6.92	+/-8.39	15.8		pCi/L					
Europium-154	U	-1.92	+/-8.19	15.4		pCi/L					
Europium-155	U	2.02	+/-8.73	16.0		pCi/L					
Iridium-192	U	0.629	+/-3.46	6.15		pCi/L					
Iron-59	U	4.26	+/-7.11	14.0		pCi/L					
Lead-210	U	214	+/-394	403		pCi/L					
Lead-212	U	6.57	+/-8.39	11.5		pCi/L					
Lead-214	U	11.3	+/-10.6	14.5		pCi/L					
Manganese-54	U	0.0176	+/-2.95	5.43		pCi/L					
Mercury-203	U	-0.0192	+/-3.46	6.11		pCi/L					
Neodymium-147	U	-18.8	+/-45.9	82.1		pCi/L					
Neptunium-239	U	-1.87	+/-23.6	42.5		pCi/L					
Niobium-94	U	2.10	+/-2.99	5.78		pCi/L					
Niobium-95	U	-0.869	+/-4.00	6.13		pCi/L					
Potassium-40	U	43.9	+/-54.4	46.5		pCi/L					
Promethium-144	U	0.360	+/-3.15	5.80		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 33 Project: WNUC00129  
Sample ID: 371595021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.54	+/-4.07	7.03	pCi/L
Radium-228	U	-14.7	+/-14.1	21.2	pCi/L
Ruthenium-106	U	17.2	+/-31.4	55.5	pCi/L
Silver-110m	U	-1.4	+/-2.95	5.18	pCi/L
Sodium-22	U	-1.17	+/-2.97	5.42	pCi/L
Thallium-208	U	3.56	+/-6.34	6.03	pCi/L
Thorium-230	U	1330	+/-1250	1390	pCi/L
Thorium-234	U	42.6	+/-168	219	pCi/L
Tin-113	U	0.830	+/-3.89	6.97	pCi/L
Uranium-235	U	-9.24	+/-23.6	33.6	pCi/L
Uranium-238	U	42.6	+/-168	219	pCi/L
Yttrium-88	U	0.208	+/-3.73	7.25	pCi/L
Zinc-65	U	-1.65	+/-6.47	11.5	pCi/L
Zirconium-95	U	-4.45	+/-5.89	9.94	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.314	+/-2.11	4.36	5.00	pCi/L	KXB2	05/16/15	1336	1475947	2
Beta	U	2.00	+/-2.90	4.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	53.6	+/-99.6	170	300	pCi/L	MYM1	05/18/15	1151	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	371595022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 08:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.90	+/-19.2	31.9		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	-3.39	+/-31.1	50.1		pCi/L					
Antimony-124	U	6.94	+/-11.1	23.9		pCi/L					
Antimony-125	U	1.57	+/-9.90	18.1		pCi/L					
Barium-133	U	-2.3	+/-5.45	8.25		pCi/L					
Barium-140	U	42.2	+/-34.2	62.6		pCi/L					
Beryllium-7	U	-7.97	+/-36.4	64.1		pCi/L					
Bismuth-212	U	-20	+/-47.5	85.6		pCi/L					
Bismuth-214	U	6.14	+/-14.7	16.8		pCi/L					
Cerium-139	U	-1.9	+/-3.30	5.47		pCi/L					
Cerium-141	U	-3.79	+/-7.66	11.3		pCi/L					
Cerium-144	U	-6.54	+/-22.0	33.4		pCi/L					
Cesium-134	U	0.0243	+/-4.16	7.81		pCi/L					
Cesium-136	U	-7.06	+/-11.5	19.6		pCi/L					
Cesium-137	U	-2.36	+/-3.63	6.38	10.0	pCi/L					
Chromium-51	U	13.6	+/-41.7	77.7		pCi/L					
Cobalt-56	U	5.62	+/-5.00	6.69		pCi/L					
Cobalt-57	U	1.50	+/-2.76	5.00		pCi/L					
Cobalt-58	U	2.35	+/-4.62	6.99		pCi/L					
Cobalt-60	U	2.30	+/-4.34	9.00		pCi/L					
Europium-152	U	4.30	+/-10.5	19.7		pCi/L					
Europium-154	U	10.6	+/-9.57	22.3		pCi/L					
Europium-155	U	-3.77	+/-10.8	18.6		pCi/L					
Iridium-192	U	1.53	+/-3.87	7.23		pCi/L					
Iron-59	U	-3.96	+/-8.43	14.7		pCi/L					
Lead-210	U	-318	+/-1450	2240		pCi/L					
Lead-212	U	3.71	+/-8.86	11.2		pCi/L					
Lead-214	U	4.25	+/-11.5	16.8		pCi/L					
Manganese-54	U	0.146	+/-3.78	7.11		pCi/L					
Mercury-203	U	2.95	+/-4.23	7.67		pCi/L					
Neodymium-147	U	38.7	+/-71.9	128		pCi/L					
Neptunium-239	U	8.38	+/-29.4	52.6		pCi/L					
Niobium-94	U	1.69	+/-3.69	7.16		pCi/L					
Niobium-95	U	2.20	+/-3.73	7.56		pCi/L					
Potassium-40	U	41.2	+/-56.1	55.3		pCi/L					
Promethium-144	U	1.78	+/-3.92	7.58		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 38 Project: WNUC00129  
Sample ID: 371595022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.3	+/-4.55	7.45	pCi/L
Radium-228	U	3.90	+/-19.2	31.9	pCi/L
Ruthenium-106	U	-7.53	+/-36.7	63.7	pCi/L
Silver-110m	U	0.759	+/-3.63	6.97	pCi/L
Sodium-22	U	3.61	+/-3.35	7.79	pCi/L
Thallium-208	U	0.722	+/-5.29	5.45	pCi/L
Thorium-230	U	2060	+/-2990	2870	pCi/L
Thorium-234	U	192	+/-398	448	pCi/L
Tin-113	U	-2.37	+/-4.91	8.50	pCi/L
Uranium-235	U	4.88	+/-25.3	36.5	pCi/L
Uranium-238	U	192	+/-398	448	pCi/L
Yttrium-88	U	-0.956	+/-4.61	8.73	pCi/L
Zinc-65	U	-5.41	+/-8.54	14.4	pCi/L
Zirconium-95	U	2.52	+/-6.94	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.62	+/-2.37	4.16	5.00	pCi/L	KXB2	05/19/15	0921	1475947	2
Beta		6.86	+/-2.88	3.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	34.4	+/-99.1	171	300	pCi/L	MYM1	05/18/15	1208	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	371595023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	26.8	+/-32.2	33.4		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	1.82	+/-29.3	45.7		pCi/L					
Antimony-124	U	3.64	+/-11.9	21.3		pCi/L					
Antimony-125	U	0.290	+/-9.90	18.2		pCi/L					
Barium-133	U	-2.21	+/-4.91	8.23		pCi/L					
Barium-140	U	-4.47	+/-30.7	55.1		pCi/L					
Beryllium-7	U	21.1	+/-35.0	67.3		pCi/L					
Bismuth-212	U	18.4	+/-55.3	103		pCi/L					
Bismuth-214	U	1.01	+/-16.3	15.1		pCi/L					
Cerium-139	U	0.555	+/-4.03	6.38		pCi/L					
Cerium-141	U	2.88	+/-7.94	14.4		pCi/L					
Cerium-144	U	-2.47	+/-23.4	41.9		pCi/L					
Cesium-134	U	0.021	+/-4.54	8.47		pCi/L					
Cesium-136	U	-0.409	+/-11.9	22.1		pCi/L					
Cesium-137	U	3.67	+/-4.28	8.31	10.0	pCi/L					
Chromium-51	U	11.8	+/-47.0	83.3		pCi/L					
Cobalt-56	U	3.25	+/-4.36	8.75		pCi/L					
Cobalt-57	U	-1.79	+/-3.32	5.11		pCi/L					
Cobalt-58	U	-1.39	+/-4.15	7.52		pCi/L					
Cobalt-60	U	1.12	+/-3.87	7.86		pCi/L					
Europium-152	U	3.09	+/-11.6	20.7		pCi/L					
Europium-154	U	16.8	+/-9.86	22.5		pCi/L					
Europium-155	U	-1.11	+/-15.7	23.5		pCi/L					
Iridium-192	U	0.468	+/-4.40	7.71		pCi/L					
Iron-59	U	-6.09	+/-9.45	16.1		pCi/L					
Lead-210	U	-449	+/-1090	1580		pCi/L					
Lead-212	U	15.7	+/-13.5	16.5		pCi/L					
Lead-214	U	4.03	+/-10.9	17.1		pCi/L					
Manganese-54	U	2.93	+/-4.01	8.00		pCi/L					
Mercury-203	U	0.943	+/-4.45	7.92		pCi/L					
Neodymium-147	U	-33.3	+/-61.2	106		pCi/L					
Neptunium-239	U	-11.2	+/-32.5	57.8		pCi/L					
Niobium-94	U	1.45	+/-4.16	7.63		pCi/L					
Niobium-95	U	1.95	+/-5.15	8.62		pCi/L					
Potassium-40	U	-31.2	+/-52.3	93.1		pCi/L					
Promethium-144	U	-3.05	+/-4.34	7.22		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 39 Project: WNUC00129  
Sample ID: 371595023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.27	+/-4.97	9.22	pCi/L
Radium-228	U	26.8	+/-32.2	33.4	pCi/L
Ruthenium-106	U	17.0	+/-34.6	65.6	pCi/L
Silver-110m	U	-0.288	+/-3.81	6.84	pCi/L
Sodium-22	U	5.94	+/-3.48	6.94	pCi/L
Thallium-208	U	0.346	+/-8.32	7.36	pCi/L
Thorium-230	U	1200	+/-2120	2970	pCi/L
Thorium-234	U	198	+/-304	450	pCi/L
Tin-113	U	2.07	+/-4.71	8.96	pCi/L
Uranium-235	U	-6.16	+/-28.5	46.1	pCi/L
Uranium-238	U	198	+/-304	450	pCi/L
Yttrium-88	U	-6.15	+/-5.26	7.92	pCi/L
Zinc-65	U	-1.68	+/-8.77	15.9	pCi/L
Zirconium-95	U	0.883	+/-7.60	13.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.34	+/-2.88	4.63	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		22.6	+/-1.86	2.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.1	+/-104	174	300	pCi/L	MYM1	05/18/15	1224	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371595024  
Matrix: Ground Water  
Collect Date: 09-APR-15 10:09  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.67	+/-20.3	32.0		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	0.199	+/-41.1	60.8		pCi/L					
Antimony-124	U	1.88	+/-9.41	19.1		pCi/L					
Antimony-125	U	3.51	+/-10.9	17.5		pCi/L					
Barium-133	U	-2.45	+/-5.98	8.80		pCi/L					
Barium-140	U	40.5	+/-39.8	77.5		pCi/L					
Beryllium-7	U	-31.6	+/-38.2	63.4		pCi/L					
Bismuth-212	U	25.9	+/-54.0	101		pCi/L					
Bismuth-214	U	9.62	+/-9.69	16.3		pCi/L					
Cerium-139	U	-2.12	+/-3.61	6.22		pCi/L					
Cerium-141	U	-3.21	+/-11.2	15.6		pCi/L					
Cerium-144	U	19.9	+/-28.3	43.6		pCi/L					
Cesium-134	U	0.680	+/-4.85	8.72		pCi/L					
Cesium-136	U	12.0	+/-14.4	29.4		pCi/L					
Cesium-137	U	1.06	+/-3.49	6.53	10.0	pCi/L					
Chromium-51	U	-8.17	+/-47.1	82.9		pCi/L					
Cobalt-56	U	2.82	+/-4.47	8.83		pCi/L					
Cobalt-57	U	0.194	+/-4.43	6.09		pCi/L					
Cobalt-58	U	1.62	+/-3.92	7.47		pCi/L					
Cobalt-60	U	-0.415	+/-3.85	7.24		pCi/L					
Europium-152	U	-2.34	+/-14.1	21.2		pCi/L					
Europium-154	U	2.99	+/-10.4	20.6		pCi/L					
Europium-155	U	2.19	+/-13.8	24.8		pCi/L					
Iridium-192	U	0.204	+/-4.78	7.51		pCi/L					
Iron-59	U	-10.2	+/-11.9	18.3		pCi/L					
Lead-210	U	725	+/-1170	1630		pCi/L					
Lead-212	U	2.54	+/-9.80	14.4		pCi/L					
Lead-214	U	7.91	+/-12.7	16.4		pCi/L					
Manganese-54	U	-1.34	+/-4.22	7.61		pCi/L					
Mercury-203	U	-1.48	+/-4.84	8.41		pCi/L					
Neodymium-147	U	-73.3	+/-88.4	146		pCi/L					
Neptunium-239	U	-6.01	+/-34.7	61.3		pCi/L					
Niobium-94	U	0.260	+/-3.67	6.58		pCi/L					
Niobium-95	U	1.59	+/-4.81	8.84		pCi/L					
Potassium-40	U	-34.1	+/-59.2	106		pCi/L					
Promethium-144	U	2.11	+/-4.09	7.59		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371595024

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.5	+/-4.99	8.38	pCi/L
Radium-228	U	-2.67	+/-20.3	32.0	pCi/L
Ruthenium-106	U	9.97	+/-37.4	68.1	pCi/L
Silver-110m	U	-1.36	+/-3.72	6.43	pCi/L
Sodium-22	U	0.0399	+/-3.79	7.24	pCi/L
Thallium-208	U	0.490	+/-8.16	7.70	pCi/L
Thorium-230	U	248	+/-2420	3690	pCi/L
Thorium-234	U	477	+/-548	559	pCi/L
Tin-113	U	3.80	+/-4.92	9.29	pCi/L
Uranium-235	U	-30.1	+/-32.5	43.5	pCi/L
Uranium-238	U	477	+/-548	559	pCi/L
Yttrium-88	U	0.879	+/-4.18	8.55	pCi/L
Zinc-65	U	-4.09	+/-8.90	15.8	pCi/L
Zirconium-95	U	0.725	+/-8.19	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.0761	+/-2.21	4.73	5.00	pCi/L	KXB2	05/16/15	1341	1475947	2
Beta		17.6	+/-3.87	4.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	62.2	+/-105	178	300	pCi/L	MYM1	05/18/15	1241	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	371595025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:50		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.2	+/-15.2	27.8		pCi/L		MJH1	04/30/15	0737 1474078	1
Americium-241	U	-24.7	+/-19.8	33.5		pCi/L					
Antimony-124	U	6.59	+/-8.93	19.5		pCi/L					
Antimony-125	U	3.94	+/-10.5	19.4		pCi/L					
Barium-133	U	3.26	+/-5.86	9.57		pCi/L					
Barium-140	U	-9.01	+/-37.3	56.2		pCi/L					
Beryllium-7	U	14.2	+/-39.2	71.8		pCi/L					
Bismuth-212	U	-58	+/-69.8	103		pCi/L					
Bismuth-214	U	3.87	+/-12.9	14.8		pCi/L					
Cerium-139	U	-2.14	+/-3.60	6.07		pCi/L					
Cerium-141	U	4.75	+/-7.68	13.8		pCi/L					
Cerium-144	U	-11	+/-25.0	42.9		pCi/L					
Cesium-134	U	-0.568	+/-5.12	8.07		pCi/L					
Cesium-136	U	2.57	+/-10.4	19.9		pCi/L					
Cesium-137	U	0.537	+/-4.34	7.77	10.0	pCi/L					
Chromium-51	U	6.54	+/-44.8	81.4		pCi/L					
Cobalt-56	U	1.70	+/-5.07	9.50		pCi/L					
Cobalt-57	U	-1.25	+/-3.11	5.36		pCi/L					
Cobalt-58	U	-2.49	+/-4.82	8.49		pCi/L					
Cobalt-60	U	1.47	+/-4.08	7.91		pCi/L					
Europium-152	U	6.43	+/-12.6	21.4		pCi/L					
Europium-154	U	3.58	+/-10.3	20.2		pCi/L					
Europium-155	U	5.21	+/-12.8	22.9		pCi/L					
Iridium-192	U	-0.593	+/-4.15	7.43		pCi/L					
Iron-59	U	3.40	+/-7.48	14.9		pCi/L					
Lead-210	U	-166	+/-621	956		pCi/L					
Lead-212	U	2.29	+/-9.35	14.0		pCi/L					
Lead-214	U	8.26	+/-15.4	17.5		pCi/L					
Manganese-54	U	1.52	+/-4.29	8.09		pCi/L					
Mercury-203	U	-4.25	+/-6.78	10.1		pCi/L					
Neodymium-147	U	-26	+/-84.7	126		pCi/L					
Neptunium-239	U	-40.2	+/-32.9	54.7		pCi/L					
Niobium-94	U	-0.565	+/-3.98	6.95		pCi/L					
Niobium-95	U	-2.36	+/-4.68	7.87		pCi/L					
Potassium-40	U	3.71	+/-51.9	61.4		pCi/L					
Promethium-144	U	0.500	+/-5.01	7.69		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 43 Project: WNUC00129  
Sample ID: 371595025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.2	+/-5.38	9.24	pCi/L
Radium-228	U	12.2	+/-15.2	27.8	pCi/L
Ruthenium-106	U	-2.17	+/-40.0	70.5	pCi/L
Silver-110m	U	0.852	+/-4.16	7.49	pCi/L
Sodium-22	U	1.15	+/-3.62	7.09	pCi/L
Thallium-208	U	-1.7	+/-5.62	7.91	pCi/L
Thorium-230	U	-603	+/-1380	2420	pCi/L
Thorium-234	U	-182	+/-208	328	pCi/L
Tin-113	U	0.707	+/-5.46	9.88	pCi/L
Uranium-235	U	-33.3	+/-29.6	43.9	pCi/L
Uranium-238	U	-182	+/-208	328	pCi/L
Yttrium-88	U	-1.81	+/-4.38	7.93	pCi/L
Zinc-65	U	-5.72	+/-8.83	15.1	pCi/L
Zirconium-95	U	1.98	+/-8.06	14.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.05	+/-2.15	4.81	5.00	pCi/L	KXB2	05/18/15	1446	1475947	2
Beta		3.67	+/-2.14	3.10	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	100	+/-105	175	300	pCi/L	MYM1	05/18/15	1257	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	371595026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:34		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.02	+/-15.3	28.4		pCi/L		MJH1	04/30/15	0737 1474078	1
Americium-241	U	-26.3	+/-12.8	17.8		pCi/L					
Antimony-124	U	-4.15	+/-7.88	13.6		pCi/L					
Antimony-125	U	-3.66	+/-8.84	15.6		pCi/L					
Barium-133	U	2.45	+/-4.38	7.28		pCi/L					
Barium-140	U	9.06	+/-26.2	48.5		pCi/L					
Beryllium-7	U	-12.2	+/-30.5	53.5		pCi/L					
Bismuth-212	U	4.47	+/-52.3	78.6		pCi/L					
Bismuth-214	U	3.53	+/-12.9	13.0		pCi/L					
Cerium-139	U	-1.74	+/-2.88	4.89		pCi/L					
Cerium-141	U	0.905	+/-6.94	11.3		pCi/L					
Cerium-144	U	2.75	+/-20.4	31.8		pCi/L					
Cesium-134	U	2.01	+/-3.56	6.08		pCi/L					
Cesium-136	U	-0.962	+/-9.15	16.9		pCi/L					
Cesium-137	U	-1.16	+/-3.64	6.33	10.0	pCi/L					
Chromium-51	U	22.3	+/-38.5	68.6		pCi/L					
Cobalt-56	U	4.66	+/-4.06	7.94		pCi/L					
Cobalt-57	U	1.40	+/-2.60	4.19		pCi/L					
Cobalt-58	U	-0.194	+/-3.41	6.10		pCi/L					
Cobalt-60	U	4.35	+/-3.49	6.99		pCi/L					
Europium-152	U	-0.435	+/-8.83	16.0		pCi/L					
Europium-154	U	-9.16	+/-11.2	13.5		pCi/L					
Europium-155	U	-3.63	+/-9.82	17.1		pCi/L					
Iridium-192	U	7.16E-05	+/-3.55	6.11		pCi/L					
Iron-59	U	-8.49	+/-8.53	12.7		pCi/L					
Lead-210	U	-52.7	+/-224	333		pCi/L					
Lead-212	U	8.60	+/-8.32	11.8		pCi/L					
Lead-214	U	4.82	+/-8.80	13.4		pCi/L					
Manganese-54	U	0.0831	+/-3.20	5.75		pCi/L					
Mercury-203	U	1.50	+/-3.81	6.72		pCi/L					
Neodymium-147	U	-15.5	+/-54.5	96.4		pCi/L					
Neptunium-239	U	-11.1	+/-26.0	45.1		pCi/L					
Niobium-94	U	-1.54	+/-3.29	5.63		pCi/L					
Niobium-95	U	-0.352	+/-3.59	6.37		pCi/L					
Potassium-40	U	6.44	+/-43.3	52.8		pCi/L					
Promethium-144	U	0.552	+/-3.45	6.22		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	371595026	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.449	+/-3.88	7.10	pCi/L
Radium-228	U	3.02	+/-15.3	28.4	pCi/L
Ruthenium-106	U	-4.54	+/-30.7	54.4	pCi/L
Silver-110m	U	-1.23	+/-3.31	5.75	pCi/L
Sodium-22	U	-3.28	+/-3.96	4.72	pCi/L
Thallium-208	U	1.32	+/-4.65	6.96	pCi/L
Thorium-230	U	1130	+/-870	1240	pCi/L
Thorium-234	U	-29.4	+/-123	193	pCi/L
Tin-113	U	1.32	+/-4.06	7.54	pCi/L
Uranium-235	U	-23.8	+/-26.0	35.0	pCi/L
Uranium-238	U	-29.4	+/-123	193	pCi/L
Yttrium-88	U	-3.19	+/-3.81	6.45	pCi/L
Zinc-65	U	0.513	+/-6.70	12.6	pCi/L
Zirconium-95	U	-3.87	+/-7.32	11.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.44	+/-3.02	4.30	5.00	pCi/L	KXB2	05/16/15	1352	1475947	2
Beta	U	4.15	+/-2.93	4.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	12.4	+/-98.2	172	300	pCi/L	MYM1	05/18/15	1314	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371595027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 11:21		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.72	+/-17.3	26.0		pCi/L		MJH1	04/30/15	0738 1474078	1
Americium-241	U	13.5	+/-19.4	35.2		pCi/L					
Antimony-124	U	-4.11	+/-7.00	12.5		pCi/L					
Antimony-125	U	1.05	+/-11.0	16.8		pCi/L					
Barium-133	U	-0.597	+/-4.92	7.42		pCi/L					
Barium-140	U	7.38	+/-22.6	42.5		pCi/L					
Beryllium-7	U	10.3	+/-27.4	51.9		pCi/L					
Bismuth-212	U	-11.9	+/-43.0	75.9		pCi/L					
Bismuth-214		23.5	+/-9.57	11.0		pCi/L					
Cerium-139	U	0.752	+/-3.06	5.17		pCi/L					
Cerium-141	U	8.57	+/-6.86	11.8		pCi/L					
Cerium-144	U	0.480	+/-20.8	37.6		pCi/L					
Cesium-134	U	-0.642	+/-3.53	5.40		pCi/L					
Cesium-136	U	2.83	+/-8.25	16.2		pCi/L					
Cesium-137	U	-5.71	+/-4.78	7.11	10.0	pCi/L					
Chromium-51	U	21.9	+/-37.2	67.6		pCi/L					
Cobalt-56	U	-1.15	+/-3.78	6.57		pCi/L					
Cobalt-57	U	-0.724	+/-2.72	4.51		pCi/L					
Cobalt-58	U	1.24	+/-3.36	6.34		pCi/L					
Cobalt-60	U	-2.32	+/-4.01	5.66		pCi/L					
Europium-152	U	-2.38	+/-9.70	16.7		pCi/L					
Europium-154	U	-4.57	+/-11.8	19.4		pCi/L					
Europium-155	U	-6.38	+/-11.1	18.2		pCi/L					
Iridium-192	U	-0.204	+/-3.56	6.21		pCi/L					
Iron-59	U	-6.25	+/-7.81	13.2		pCi/L					
Lead-210	U	-113	+/-779	1200		pCi/L					
Lead-212	U	2.89	+/-10.1	10.5		pCi/L					
Lead-214	U	0.964	+/-12.9	12.9		pCi/L					
Manganese-54	U	-0.448	+/-3.11	5.52		pCi/L					
Mercury-203	U	3.98	+/-3.77	7.04		pCi/L					
Neodymium-147	U	26.8	+/-46.9	90.0		pCi/L					
Neptunium-239	U	-14.1	+/-29.1	47.8		pCi/L					
Niobium-94	U	4.78	+/-3.28	6.59		pCi/L					
Niobium-95	U	2.67	+/-3.80	7.26		pCi/L					
Potassium-40	U	50.4	+/-69.6	63.1		pCi/L					
Promethium-144	U	-0.597	+/-3.84	6.04		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371595027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.68	+/-4.11	7.74	pCi/L
Radium-228	U	-9.72	+/-17.3	26.0	pCi/L
Ruthenium-106	U	16.9	+/-29.8	56.7	pCi/L
Silver-110m	U	-0.592	+/-3.51	6.23	pCi/L
Sodium-22	U	-1.62	+/-4.15	6.84	pCi/L
Thallium-208	U	2.32	+/-6.20	5.79	pCi/L
Thorium-230	U	761	+/-1360	2400	pCi/L
Thorium-234	U	-131	+/-198	326	pCi/L
Tin-113	U	1.75	+/-4.65	8.29	pCi/L
Uranium-235	U	-15.1	+/-26.4	38.0	pCi/L
Uranium-238	U	-131	+/-198	326	pCi/L
Yttrium-88	U	-2.48	+/-3.96	6.92	pCi/L
Zinc-65	U	3.99	+/-7.19	12.9	pCi/L
Zirconium-95	U	0.376	+/-6.36	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.07	+/-2.40	3.99	5.00	pCi/L	KXB2	05/16/15	1342	1475947	2
Beta		74.6	+/-6.03	4.93	5.00	pCi/L					
Alpha	U	1.33	+/-2.68	4.97	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta		69.2	+/-7.01	3.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	116	+/-104	173	300	pCi/L	MYM1	05/18/15	1330	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID: WELL 47  
Sample ID: 371595027

Project: WNUC00129  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	371595028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:35		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.7	+/-15.5	23.3		pCi/L		MJH1	04/30/15	0738 1474078	1
Americium-241	U	20.2	+/-18.2	30.7		pCi/L					
Antimony-124	U	6.93	+/-9.10	19.5		pCi/L					
Antimony-125	U	3.35	+/-8.18	15.1		pCi/L					
Barium-133	U	1.70	+/-4.33	7.91		pCi/L					
Barium-140	U	6.60	+/-33.3	60.5		pCi/L					
Beryllium-7	U	-0.185	+/-30.9	55.4		pCi/L					
Bismuth-212	U	63.0	+/-48.1	87.7		pCi/L					
Bismuth-214	U	-1.59	+/-9.27	14.6		pCi/L					
Cerium-139	U	-0.721	+/-3.61	5.38		pCi/L					
Cerium-141	U	-6.07	+/-7.19	11.7		pCi/L					
Cerium-144	U	-2.78	+/-20.8	35.5		pCi/L					
Cesium-134	U	1.48	+/-3.24	6.33		pCi/L					
Cesium-136	U	0.209	+/-11.7	21.9		pCi/L					
Cesium-137	U	-1.38	+/-3.11	5.29	10.0	pCi/L					
Chromium-51	U	-19.3	+/-41.9	73.3		pCi/L					
Cobalt-56	U	2.49	+/-3.39	6.78		pCi/L					
Cobalt-57	U	0.351	+/-2.76	4.77		pCi/L					
Cobalt-58	U	-0.453	+/-3.62	6.66		pCi/L					
Cobalt-60	U	1.82	+/-3.23	6.48		pCi/L					
Europium-152	U	-3.58	+/-9.34	16.4		pCi/L					
Europium-154	U	11.7	+/-12.0	18.6		pCi/L					
Europium-155	U	6.00	+/-10.6	18.8		pCi/L					
Iridium-192	U	0.116	+/-3.51	6.32		pCi/L					
Iron-59	U	-9.64	+/-8.09	9.89		pCi/L					
Lead-210	U	340	+/-610	803		pCi/L					
Lead-212	U	8.40	+/-7.66	11.7		pCi/L					
Lead-214	U	2.54	+/-8.67	14.1		pCi/L					
Manganese-54	U	3.06	+/-3.26	5.84		pCi/L					
Mercury-203	U	0.638	+/-3.81	6.74		pCi/L					
Neodymium-147	U	-31.9	+/-75.3	129		pCi/L					
Neptunium-239	U	-9.0	+/-28.6	48.4		pCi/L					
Niobium-94	U	-0.345	+/-2.86	5.01		pCi/L					
Niobium-95	U	0.917	+/-3.52	6.72		pCi/L					
Potassium-40	U	-35.5	+/-50.7	93.3		pCi/L					
Promethium-144	U	1.55	+/-3.05	5.65		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 48 Project: WNUC00129  
Sample ID: 371595028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.787	+/-3.85	7.00	pCi/L
Radium-228	U	-10.7	+/-15.5	23.3	pCi/L
Ruthenium-106	U	-9.87	+/-29.5	50.7	pCi/L
Silver-110m	U	0.213	+/-3.14	5.60	pCi/L
Sodium-22	U	4.13	+/-4.25	4.27	pCi/L
Thallium-208	U	-3.45	+/-4.17	6.30	pCi/L
Thorium-230	U	-866	+/-1350	1920	pCi/L
Thorium-234	U	147	+/-219	241	pCi/L
Tin-113	U	2.46	+/-4.26	7.94	pCi/L
Uranium-235	U	-7.68	+/-23.6	35.4	pCi/L
Uranium-238	U	147	+/-219	241	pCi/L
Yttrium-88	U	-2.1	+/-3.75	6.68	pCi/L
Zinc-65	U	-0.196	+/-6.58	10.7	pCi/L
Zirconium-95	U	-0.112	+/-7.10	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.44	+/-2.62	4.19	5.00	pCi/L	KXB2	05/16/15	1342	1475947	2
Beta		11.4	+/-3.69	4.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.5	+/-93.5	169	300	pCi/L	MYM1	05/18/15	1347	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## QC Summary

Report Date: May 19, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 371595

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
QC1203306677	371595001	DUP									
Actinium-228	U	-20.4	U	12.3	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-19.4		+/-18.9							
Americium-241	U	16.3	U	-9.67	pCi/L	N/A		N/A			
	Uncertainty	+/-33.1		+/-19.7							
Antimony-124	U	1.18	U	5.51	pCi/L	N/A		N/A			
	Uncertainty	+/-11.0		+/-9.77							
Antimony-125	U	4.83	U	2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-11.1		+/-11.3							
Barium-133	U	-1.35	U	-3.21	pCi/L	N/A		N/A			
	Uncertainty	+/-4.94		+/-5.39							
Barium-140	U	-19.2	U	16.6	pCi/L	N/A		N/A			
	Uncertainty	+/-35.7		+/-41.6							
Beryllium-7	U	6.01	U	-11	pCi/L	N/A		N/A			
	Uncertainty	+/-34.2		+/-45.0							
Bismuth-212	U	-15.9	U	-16.9	pCi/L	N/A		N/A			
	Uncertainty	+/-59.9		+/-72.3							
Bismuth-214	U	-14.7	U	8.55	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-11.6							
Cerium-139	U	1.65	U	-1.39	pCi/L	N/A		N/A			
	Uncertainty	+/-3.47		+/-3.84							
Cerium-141	U	-4.61	U	4.39	pCi/L	N/A		N/A			
	Uncertainty	+/-7.43		+/-8.98							
Cerium-144	U	6.76	U	-11	pCi/L	N/A		N/A			
	Uncertainty	+/-21.3		+/-24.6							
Cesium-134	U	2.56	U	-2.86	pCi/L	N/A		N/A			
	Uncertainty	+/-4.31		+/-4.42							
Cesium-136	U	-3.66	U	10.7	pCi/L	N/A		N/A			
	Uncertainty	+/-13.3		+/-16.2							
Cesium-137	U	-0.249	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-3.89		+/-5.05							
Chromium-51	U	-6.74	U	26.6	pCi/L	N/A		N/A			
	Uncertainty	+/-47.8		+/-52.6							
Cobalt-56	U	4.67	U	-3.91	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-5.33							
Cobalt-57	U	-1.17	U	2.50	pCi/L	N/A		N/A			
	Uncertainty	+/-2.86		+/-3.22							
Cobalt-58	U	-1.73	U	3.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.90		+/-4.60							
Cobalt-60	U	-1.91	U	3.19	pCi/L	N/A		N/A			
	Uncertainty	+/-3.57		+/-3.79							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Europium-152	U	-2.24	U	2.25	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-11.5		+/-12.3							
Europium-154	U	13.8	U	-5.2	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-10.5							
Europium-155	U	0.070	U	-5.61	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-12.8							
Iridium-192	U	-0.259	U	-1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-4.31		+/-4.67							
Iron-59	U	-5.36	U	-2.87	pCi/L	N/A		N/A			
	Uncertainty	+/-9.49		+/-9.35							
Lead-210	U	1440	U	-298	pCi/L	N/A		N/A			
	Uncertainty	+/-1180		+/-613							
Lead-212	U	-12.4	U	11.8	pCi/L	N/A		N/A			
	Uncertainty	+/-8.93		+/-11.9							
Lead-214	U	-6.17	U	-7.76	pCi/L	N/A		N/A			
	Uncertainty	+/-10.3		+/-11.4							
Manganese-54	U	-0.225	U	-3.56	pCi/L	N/A		N/A			
	Uncertainty	+/-3.91		+/-4.16							
Mercury-203	U	-0.0597	U	-6.97	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-7.12							
Neodymium-147	U	3.63	U	-68.9	pCi/L	N/A		N/A			
	Uncertainty	+/-74.6		+/-94.4							
Neptunium-239	U	-14.6	U	-15.3	pCi/L	N/A		N/A			
	Uncertainty	+/-31.1		+/-32.2							
Niobium-94	U	-2.19	U	-1.92	pCi/L	N/A		N/A			
	Uncertainty	+/-3.66		+/-4.06							
Niobium-95	U	-0.0521	U	3.43	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-5.36							
Potassium-40	U	-66.8	U	-37.7	pCi/L	N/A		N/A			
	Uncertainty	+/-48.7		+/-55.1							
Promethium-144	U	1.11	U	2.31	pCi/L	N/A		N/A			
	Uncertainty	+/-3.63		+/-4.47							
Promethium-146	U	0.140	U	-1.99	pCi/L	N/A		N/A			
	Uncertainty	+/-4.61		+/-5.92							
Radium-228	U	-20.4	U	12.3	pCi/L	N/A		N/A			
	Uncertainty	+/-19.4		+/-18.9							
Ruthenium-106	U	15.2	U	-14.8	pCi/L	N/A		N/A			
	Uncertainty	+/-33.4		+/-37.6							
Silver-110m	U	1.57	U	2.60	pCi/L	N/A		N/A			
	Uncertainty	+/-3.68		+/-3.71							
Sodium-22	U	4.95	U	-1.25	pCi/L	N/A		N/A			
	Uncertainty	+/-4.39		+/-3.64							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Thallium-208	U	-0.92	U	4.22	pCi/L	N/A		N/A			
	Uncertainty	+/-5.08		+/-5.64							
Thorium-230	U	-1060	U	73.1	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-1770		+/-1320							
Thorium-234	U	55.9	U	-270	pCi/L	N/A		N/A			
	Uncertainty	+/-404		+/-200							
Tin-113	U	2.13	U	3.82	pCi/L	N/A		N/A			
	Uncertainty	+/-5.23		+/-5.78							
Uranium-235	U	-29	U	6.49	pCi/L	N/A		N/A			
	Uncertainty	+/-27.1		+/-31.5							
Uranium-238	U	55.9	U	-270	pCi/L	N/A		N/A			
	Uncertainty	+/-404		+/-200							
Yttrium-88	U	5.65	U	3.87	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-4.60							
Zinc-65	U	0.997	U	2.30	pCi/L	N/A		N/A			
	Uncertainty	+/-10.5		+/-7.88							
Zirconium-95	U	-1.64	U	3.71	pCi/L	N/A		N/A			
	Uncertainty	+/-8.86		+/-9.51							
QC1203306678	LCS										
Actinium-228			U	-173	pCi/L					04/29/15	10:37
	Uncertainty			+/-967							
Americium-241	1.10E+05			1.26E+05	pCi/L		114	(75%-125%)			
	Uncertainty			+/-2960							
Antimony-124			U	236	pCi/L						
	Uncertainty			+/-186							
Antimony-125			U	-11.3	pCi/L						
	Uncertainty			+/-593							
Barium-133			U	14.6	pCi/L						
	Uncertainty			+/-211							
Barium-140			U	-314	pCi/L						
	Uncertainty			+/-710							
Beryllium-7			U	1090	pCi/L						
	Uncertainty			+/-1610							
Bismuth-212			U	86.8	pCi/L						
	Uncertainty			+/-2530							
Bismuth-214			U	-72.8	pCi/L						
	Uncertainty			+/-337							
Cerium-139			U	179	pCi/L						
	Uncertainty			+/-163							
Cerium-141			U	-210	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	-324	pCi/L						
	Uncertainty			+/-1010							
Cesium-134			U	-68	pCi/L						
	Uncertainty										



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Cesium-136			U	+/-225 334	pCi/L				MJH1	04/29/15	10:37
	Uncertainty			+/-367							
Cesium-137	44200			46500	pCi/L		105	(75%-125%)			
	Uncertainty			+/-823							
Chromium-51			U	615	pCi/L						
	Uncertainty			+/-1580							
Cobalt-56			U	-16.8	pCi/L						
	Uncertainty			+/-215							
Cobalt-57				2200	pCi/L						
	Uncertainty			+/-214							
Cobalt-58			U	-50.1	pCi/L						
	Uncertainty			+/-198							
Cobalt-60	50400			51800	pCi/L		103	(75%-125%)			
	Uncertainty			+/-1010							
Europium-152			U	-44.6	pCi/L						
	Uncertainty			+/-524							
Europium-154			U	-14.3	pCi/L						
	Uncertainty			+/-341							
Europium-155			U	-48	pCi/L						
	Uncertainty			+/-489							
Iridium-192			U	-31.3	pCi/L						
	Uncertainty			+/-180							
Iron-59			U	93.1	pCi/L						
	Uncertainty			+/-477							
Lead-210				1.44E+06	pCi/L						
	Uncertainty			+/-65100							
Lead-212			U	151	pCi/L						
	Uncertainty			+/-278							
Lead-214			U	157	pCi/L						
	Uncertainty			+/-375							
Manganese-54			U	74.1	pCi/L						
	Uncertainty			+/-208							
Mercury-203			U	184	pCi/L						
	Uncertainty			+/-181							
Neodymium-147			U	299	pCi/L						
	Uncertainty			+/-1340							
Neptunium-239			U	123	pCi/L						
	Uncertainty			+/-1430							
Niobium-94			U	93.4	pCi/L						
	Uncertainty			+/-169							
Niobium-95			U	-105	pCi/L						
	Uncertainty			+/-195							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Potassium-40			U	-321	pCi/L						
	Uncertainty			+/-1020							
Promethium-144			U	-22	pCi/L				MJH1	04/29/15	10:37
	Uncertainty			+/-162							
Promethium-146			U	182	pCi/L						
	Uncertainty			+/-277							
Radium-228			U	-173	pCi/L						
	Uncertainty			+/-967							
Ruthenium-106			U	-1900	pCi/L						
	Uncertainty			+/-1570							
Silver-110m				1520	pCi/L						
	Uncertainty			+/-254							
Sodium-22			U	-3.14	pCi/L						
	Uncertainty			+/-119							
Thallium-208			U	-32	pCi/L						
	Uncertainty			+/-181							
Thorium-230			U	64500	pCi/L						
	Uncertainty			+/-61600							
Thorium-234			U	-12600	pCi/L						
	Uncertainty			+/-8140							
Tin-113			U	88.0	pCi/L						
	Uncertainty			+/-227							
Uranium-235			U	712	pCi/L						
	Uncertainty			+/-847							
Uranium-238			U	-12600	pCi/L						
	Uncertainty			+/-8140							
Yttrium-88				253	pCi/L						
	Uncertainty			+/-174							
Zinc-65				7020	pCi/L						
	Uncertainty			+/-1100							
Zirconium-95			U	-194	pCi/L						
	Uncertainty			+/-342							
QC1203306676	MB										
Actinium-228			U	1.34	pCi/L					04/29/15	10:07
	Uncertainty			+/-18.2							
Americium-241			U	3.85	pCi/L						
	Uncertainty			+/-10.4							
Antimony-124			U	3.31	pCi/L						
	Uncertainty			+/-7.20							
Antimony-125			U	0.780	pCi/L						
	Uncertainty			+/-8.30							
Barium-133			U	-4.88	pCi/L						
	Uncertainty			+/-4.74							
Barium-140			U	0.752	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Beryllium-7			U	+/-12.6 -5.04	pCi/L				MJH1	04/29/15	10:07
	Uncertainty			+/-27.2							
Bismuth-212			U	7.14	pCi/L						
	Uncertainty			+/-57.2							
Bismuth-214			U	-8.45	pCi/L						
	Uncertainty			+/-9.34							
Cerium-139			U	-0.519	pCi/L						
	Uncertainty			+/-2.51							
Cerium-141			U	-0.95	pCi/L						
	Uncertainty			+/-4.25							
Cerium-144			U	7.90	pCi/L						
	Uncertainty			+/-16.5							
Cesium-134			U	2.54	pCi/L						
	Uncertainty			+/-3.62							
Cesium-136			U	7.51	pCi/L						
	Uncertainty			+/-4.76							
Cesium-137			U	1.93	pCi/L						
	Uncertainty			+/-3.48							
Chromium-51			U	-7.02	pCi/L						
	Uncertainty			+/-26.7							
Cobalt-56			U	-0.926	pCi/L						
	Uncertainty			+/-3.46							
Cobalt-57			U	0.434	pCi/L						
	Uncertainty			+/-2.07							
Cobalt-58			U	1.30	pCi/L						
	Uncertainty			+/-3.18							
Cobalt-60			U	-0.598	pCi/L						
	Uncertainty			+/-3.66							
Europium-152			U	7.09	pCi/L						
	Uncertainty			+/-8.95							
Europium-154			U	-0.933	pCi/L						
	Uncertainty			+/-12.6							
Europium-155			U	4.27	pCi/L						
	Uncertainty			+/-8.69							
Iridium-192			U	0.0307	pCi/L						
	Uncertainty			+/-3.03							
Iron-59			U	-7.29	pCi/L						
	Uncertainty			+/-7.47							
Lead-210			U	143	pCi/L						
	Uncertainty			+/-316							
Lead-212			U	0.0874	pCi/L						
	Uncertainty			+/-8.87							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Lead-214			U	1.54	pCi/L						
	Uncertainty			+/-8.20							
Manganese-54			U	-1.59	pCi/L				MJH1	04/29/15	10:07
	Uncertainty			+/-3.94							
Mercury-203			U	0.295	pCi/L						
	Uncertainty			+/-2.95							
Neodymium-147			U	-9.87	pCi/L						
	Uncertainty			+/-24.3							
Neptunium-239			U	10.9	pCi/L						
	Uncertainty			+/-24.4							
Niobium-94			U	-0.856	pCi/L						
	Uncertainty			+/-3.40							
Niobium-95			U	1.40	pCi/L						
	Uncertainty			+/-3.16							
Potassium-40			U	-36	pCi/L						
	Uncertainty			+/-50.4							
Promethium-144			U	0.273	pCi/L						
	Uncertainty			+/-3.54							
Promethium-146			U	2.45	pCi/L						
	Uncertainty			+/-3.83							
Radium-228			U	1.34	pCi/L						
	Uncertainty			+/-18.2							
Ruthenium-106			U	-9.99	pCi/L						
	Uncertainty			+/-27.5							
Silver-110m			U	-4.69	pCi/L						
	Uncertainty			+/-3.01							
Sodium-22			U	-0.375	pCi/L						
	Uncertainty			+/-4.40							
Thallium-208			U	0.571	pCi/L						
	Uncertainty			+/-4.33							
Thorium-230			U	-159	pCi/L						
	Uncertainty			+/-826							
Thorium-234			U	0.673	pCi/L						
	Uncertainty			+/-130							
Tin-113			U	2.07	pCi/L						
	Uncertainty			+/-3.77							
Uranium-235			U	12.5	pCi/L						
	Uncertainty			+/-21.7							
Uranium-238			U	0.673	pCi/L						
	Uncertainty			+/-130							
Yttrium-88			U	0.499	pCi/L						
	Uncertainty			+/-2.99							
Zinc-65			U	3.57	pCi/L						
	Uncertainty			+/-7.58							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Zirconium-95			U	-2.05	pCi/L						
	Uncertainty			+/-5.98							
Batch	1474078										
QC1203306680 371595021 DUP											
Actinium-228	U	-14.7	U	13.4	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-14.1		+/-18.1							
Americium-241	U	13.0	U	7.09	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-36.4							
Antimony-124	U	8.18	U	7.72	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-10.8							
Antimony-125	U	1.95	U	9.84	pCi/L	N/A		N/A			
	Uncertainty	+/-8.06		+/-11.6							
Barium-133	U	-0.197	U	-0.995	pCi/L	N/A		N/A			
	Uncertainty	+/-5.48		+/-9.59							
Barium-140	U	6.15	U	-0.195	pCi/L	N/A		N/A			
	Uncertainty	+/-21.4		+/-36.1							
Beryllium-7	U	2.04	U	15.1	pCi/L	N/A		N/A			
	Uncertainty	+/-27.6		+/-39.1							
Bismuth-212	U	36.5	U	45.2	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-64.8							
Bismuth-214		13.7	U	1.14	pCi/L	24.9		(0% - 100%)			
	Uncertainty	+/-10.6		+/-10.3							
Cerium-139	U	1.72	U	0.107	pCi/L	N/A		N/A			
	Uncertainty	+/-2.56		+/-4.04							
Cerium-141	U	-1.24	U	4.28	pCi/L	N/A		N/A			
	Uncertainty	+/-5.72		+/-7.90							
Cerium-144	U	-5.43	U	-10.2	pCi/L	N/A		N/A			
	Uncertainty	+/-19.2		+/-24.7							
Cesium-134	U	0.635	U	-8.11	pCi/L	N/A		N/A			
	Uncertainty	+/-3.30		+/-5.37							
Cesium-136	U	2.97	U	-0.944	pCi/L	N/A		N/A			
	Uncertainty	+/-8.30		+/-12.8							
Cesium-137	U	0.781	U	-0.743	pCi/L	N/A		N/A			
	Uncertainty	+/-3.19		+/-4.31							
Chromium-51	U	-29.9	U	-12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-37.6		+/-45.3							
Cobalt-56	U	-2.76	U	-0.103	pCi/L	N/A		N/A			
	Uncertainty	+/-4.12		+/-4.71							
Cobalt-57	U	-1.28	U	-1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-2.32		+/-3.19							
Cobalt-58	U	1.26	U	-0.641	pCi/L	N/A		N/A			
	Uncertainty	+/-3.08		+/-4.45							
Cobalt-60	U	-2.16	U	0.884	pCi/L	N/A		N/A			
	Uncertainty	+/-3.02		+/-4.02							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Europium-152	U	6.92	U	-9.58	pCi/L	N/A		N/A			
	Uncertainty	+/-8.39		+/-14.0							
Europium-154	U	-1.92	U	-7.06	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-8.19		+/-12.1							
Europium-155	U	2.02	U	5.45	pCi/L	N/A		N/A			
	Uncertainty	+/-8.73		+/-12.3							
Iridium-192	U	0.629	U	-4.4	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-4.16							
Iron-59	U	4.26	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-7.11		+/-9.49							
Lead-210	U	214	U	-131	pCi/L	N/A		N/A			
	Uncertainty	+/-394		+/-646							
Lead-212	U	6.57	U	12.2	pCi/L	N/A		N/A			
	Uncertainty	+/-8.39		+/-13.6							
Lead-214	U	11.3	U	0.397	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-15.8							
Manganese-54	U	0.0176	U	4.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.95		+/-5.04							
Mercury-203	U	-0.0192	U	-4.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-5.36							
Neodymium-147	U	-18.8	U	-33.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.9		+/-83.7							
Neptunium-239	U	-1.87	U	-6.03	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-33.1							
Niobium-94	U	2.10	U	-5.02	pCi/L	N/A		N/A			
	Uncertainty	+/-2.99		+/-3.96							
Niobium-95	U	-0.869	U	4.56	pCi/L	N/A		N/A			
	Uncertainty	+/-4.00		+/-4.45							
Potassium-40	U	43.9	U	-66.4	pCi/L	N/A		N/A			
	Uncertainty	+/-54.4		+/-55.0							
Promethium-144	U	0.360	U	4.95	pCi/L	N/A		N/A			
	Uncertainty	+/-3.15		+/-4.19							
Promethium-146	U	2.54	U	-2.41	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-5.13							
Radium-228	U	-14.7	U	13.4	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-18.1							
Ruthenium-106	U	17.2	U	38.8	pCi/L	N/A		N/A			
	Uncertainty	+/-31.4		+/-37.2							
Silver-110m	U	-1.4	U	4.35	pCi/L	N/A		N/A			
	Uncertainty	+/-2.95		+/-4.23							
Sodium-22	U	-1.17	U	-2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-2.97		+/-4.25							
Thallium-208	U	3.56	U	3.69	pCi/L	N/A		N/A			
	Uncertainty	+/-6.34		+/-5.56							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Thorium-230	U	1330	U	1150	pCi/L	N/A		N/A			
	Uncertainty	+/-1250		+/-1640							
Thorium-234	U	42.6	U	42.0	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-168		+/-256							
Tin-113	U	0.830	U	-3.78	pCi/L	N/A		N/A			
	Uncertainty	+/-3.89		+/-5.45							
Uranium-235	U	-9.24	U	-13	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-28.5							
Uranium-238	U	42.6	U	42.0	pCi/L	N/A		N/A			
	Uncertainty	+/-168		+/-256							
Yttrium-88	U	0.208	U	-0.296	pCi/L	N/A		N/A			
	Uncertainty	+/-3.73		+/-4.93							
Zinc-65	U	-1.65	U	1.55	pCi/L	N/A		N/A			
	Uncertainty	+/-6.47		+/-9.33							
Zirconium-95	U	-4.45	U	9.75	pCi/L	N/A		N/A			
	Uncertainty	+/-5.89		+/-10.9							
QC1203306681	LCS										
Actinium-228			U	-463	pCi/L					04/29/15	10:54
	Uncertainty			+/-981							
Americium-241	1.10E+05			1.25E+05	pCi/L		113	(75%-125%)			
	Uncertainty			+/-3010							
Antimony-124			U	-74.2	pCi/L						
	Uncertainty			+/-180							
Antimony-125			U	366	pCi/L						
	Uncertainty			+/-532							
Barium-133			U	-10.8	pCi/L						
	Uncertainty			+/-213							
Barium-140			U	-234	pCi/L						
	Uncertainty			+/-705							
Beryllium-7			U	-704	pCi/L						
	Uncertainty			+/-1670							
Bismuth-212			U	-861	pCi/L						
	Uncertainty			+/-2560							
Bismuth-214			U	141	pCi/L						
	Uncertainty			+/-371							
Cerium-139			U	117	pCi/L						
	Uncertainty			+/-137							
Cerium-141			U	83.4	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	-151	pCi/L						
	Uncertainty			+/-984							
Cesium-134			U	-31.1	pCi/L						
	Uncertainty			+/-258							
Cesium-136			U	-20	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Cesium-137	44200			+/-357 46700	pCi/L		106	(75%-125%)	MJH1	04/29/15	10:54
	Uncertainty			+/-842							
Chromium-51			U	-14.7	pCi/L						
	Uncertainty			+/-1340							
Cobalt-56			U	-132	pCi/L						
	Uncertainty			+/-223							
Cobalt-57				2120	pCi/L						
	Uncertainty			+/-212							
Cobalt-58			U	142	pCi/L						
	Uncertainty			+/-199							
Cobalt-60	50400			52900	pCi/L		105	(75%-125%)			
	Uncertainty			+/-1010							
Europium-152			U	-44.3	pCi/L						
	Uncertainty			+/-554							
Europium-154			U	130	pCi/L						
	Uncertainty			+/-355							
Europium-155			U	-260	pCi/L						
	Uncertainty			+/-527							
Iridium-192			U	64.2	pCi/L						
	Uncertainty			+/-153							
Iron-59			U	-58.8	pCi/L						
	Uncertainty			+/-485							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-73400							
Lead-212			U	466	pCi/L						
	Uncertainty			+/-444							
Lead-214			U	298	pCi/L						
	Uncertainty			+/-391							
Manganese-54			U	130	pCi/L						
	Uncertainty			+/-207							
Mercury-203			U	-46.5	pCi/L						
	Uncertainty			+/-163							
Neodymium-147			U	494	pCi/L						
	Uncertainty			+/-1320							
Neptunium-239			U	-116	pCi/L						
	Uncertainty			+/-1420							
Niobium-94			U	48.9	pCi/L						
	Uncertainty			+/-165							
Niobium-95			U	-53.4	pCi/L						
	Uncertainty			+/-192							
Potassium-40			U	-630	pCi/L						
	Uncertainty			+/-916							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Promethium-144			U	-40.2	pCi/L						
	Uncertainty			+/-165							
Promethium-146			U	-28.4	pCi/L				MJH1	04/29/15	10:54
	Uncertainty			+/-259							
Radium-228			U	-463	pCi/L						
	Uncertainty			+/-981							
Ruthenium-106			U	-2100	pCi/L						
	Uncertainty			+/-1580							
Silver-110m				1490	pCi/L						
	Uncertainty			+/-249							
Sodium-22			U	14.0	pCi/L						
	Uncertainty			+/-126							
Thallium-208			U	4.08	pCi/L						
	Uncertainty			+/-178							
Thorium-230			U	95100	pCi/L						
	Uncertainty			+/-68500							
Thorium-234			U	-13900	pCi/L						
	Uncertainty			+/-8220							
Tin-113			U	280	pCi/L						
	Uncertainty			+/-226							
Uranium-235			U	760	pCi/L						
	Uncertainty			+/-864							
Uranium-238			U	-13900	pCi/L						
	Uncertainty			+/-8220							
Yttrium-88			U	141	pCi/L						
	Uncertainty			+/-109							
Zinc-65				6190	pCi/L						
	Uncertainty			+/-842							
Zirconium-95			U	22.9	pCi/L						
	Uncertainty			+/-343							
QC1203306679	MB										
Actinium-228			U	17.0	pCi/L					04/30/15	07:38
	Uncertainty			+/-29.7							
Americium-241			U	7.49	pCi/L						
	Uncertainty			+/-26.6							
Antimony-124			U	2.38	pCi/L						
	Uncertainty			+/-9.75							
Antimony-125			U	3.90	pCi/L						
	Uncertainty			+/-10.4							
Barium-133			U	-1.27	pCi/L						
	Uncertainty			+/-4.27							
Barium-140			U	-4.09	pCi/L						
	Uncertainty			+/-17.4							
Beryllium-7			U	16.7	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Bismuth-212				+/-30.2							
			U	15.0	pCi/L				MJH1	04/30/15	07:38
Bismuth-214	Uncertainty			+/-52.8							
			U	-4.14	pCi/L						
Cerium-139	Uncertainty			+/-12.1							
			U	0.871	pCi/L						
Cerium-141	Uncertainty			+/-3.15							
			U	1.13	pCi/L						
Cerium-144	Uncertainty			+/-6.50							
			U	2.12	pCi/L						
Cesium-134	Uncertainty			+/-20.7							
			U	1.07	pCi/L						
Cesium-136	Uncertainty			+/-4.15							
			U	5.77	pCi/L						
Cesium-137	Uncertainty			+/-5.30							
			U	4.62	pCi/L						
Chromium-51	Uncertainty			+/-3.46							
			U	16.0	pCi/L						
Cobalt-56	Uncertainty			+/-34.8							
			U	-0.448	pCi/L						
Cobalt-57	Uncertainty			+/-3.65							
			U	-0.958	pCi/L						
Cobalt-58	Uncertainty			+/-2.79							
			U	-0.633	pCi/L						
Cobalt-60	Uncertainty			+/-4.60							
			U	-0.62	pCi/L						
Europium-152	Uncertainty			+/-3.71							
			U	3.84	pCi/L						
Europium-154	Uncertainty			+/-10.8							
			U	-0.843	pCi/L						
Europium-155	Uncertainty			+/-10.9							
			U	-8.42	pCi/L						
Iridium-192	Uncertainty			+/-11.1							
			U	-0.584	pCi/L						
Iron-59	Uncertainty			+/-3.47							
			U	1.52	pCi/L						
Lead-210	Uncertainty			+/-7.37							
			U	950	pCi/L						
Lead-212	Uncertainty			+/-1140							
			U	0.268	pCi/L						
Lead-214	Uncertainty			+/-7.63							
			U	-0.0138	pCi/L						
	Uncertainty			+/-7.82							

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1474078										
Manganese-54			U	-1.37	pCi/L						
	Uncertainty			+/-4.09							
Mercury-203			U	-0.176	pCi/L				MJH1	04/30/15	07:38
	Uncertainty			+/-3.22							
Neodymium-147			U	-5.1	pCi/L						
	Uncertainty			+/-31.9							
Neptunium-239			U	-23.9	pCi/L						
	Uncertainty			+/-28.9							
Niobium-94			U	4.35	pCi/L						
	Uncertainty			+/-4.16							
Niobium-95			U	1.47	pCi/L						
	Uncertainty			+/-3.64							
Potassium-40			U	-46.7	pCi/L						
	Uncertainty			+/-55.7							
Promethium-144			U	0.399	pCi/L						
	Uncertainty			+/-4.48							
Promethium-146			U	-2.26	pCi/L						
	Uncertainty			+/-4.66							
Radium-228			U	17.0	pCi/L						
	Uncertainty			+/-29.7							
Ruthenium-106			U	1.65	pCi/L						
	Uncertainty			+/-35.2							
Silver-110m			U	-1.94	pCi/L						
	Uncertainty			+/-3.55							
Sodium-22			U	0.423	pCi/L						
	Uncertainty			+/-3.71							
Thallium-208			U	3.81	pCi/L						
	Uncertainty			+/-5.25							
Thorium-230			U	-1200	pCi/L						
	Uncertainty			+/-1580							
Thorium-234			U	-76.8	pCi/L						
	Uncertainty			+/-256							
Tin-113			U	-0.675	pCi/L						
	Uncertainty			+/-4.45							
Uranium-235			U	2.11	pCi/L						
	Uncertainty			+/-40.3							
Uranium-238			U	-76.8	pCi/L						
	Uncertainty			+/-256							
Yttrium-88			U	-3.54	pCi/L						
	Uncertainty			+/-4.17							
Zinc-65			U	-4.68	pCi/L						
	Uncertainty			+/-8.46							
Zirconium-95			U	-4.34	pCi/L						
	Uncertainty			+/-6.62							

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1475946										
QC1203311373	371595003	DUP									
Alpha	U	4.02		4.64	pCi/L	14.3		(0% - 100%)	KXB2	05/17/15	13:02
	Uncertainty	+/-3.23		+/-2.70							
Beta		109		113	pCi/L	2.98		(0%-20%)			
	Uncertainty	+/-4.14		+/-3.98							
QC1203311374	LCS										
Alpha	122			110	pCi/L		90.9	(75%-125%)		05/17/15	13:02
	Uncertainty			+/-11.7							
Beta	472			490	pCi/L		104	(75%-125%)			
	Uncertainty			+/-17.6							
QC1203311372	MB										
Alpha			U	-0.343	pCi/L					05/19/15	10:59
	Uncertainty			+/-1.13							
Beta			U	-1.84	pCi/L						
	Uncertainty			+/-1.53							
Batch	1475947										
QC1203311376	371595017	DUP									
Alpha	U	3.15	U	1.48	pCi/L	N/A		N/A	KXB2	05/17/15	13:26
	Uncertainty	+/-5.29		+/-3.37							
Beta		33.9		35.2	pCi/L	3.53		(0%-20%)			
	Uncertainty	+/-3.73		+/-3.48							
QC1203311377	LCS										
Alpha	122			133	pCi/L		109	(75%-125%)		05/16/15	13:35
	Uncertainty			+/-12.8							
Beta	472			517	pCi/L		110	(75%-125%)			
	Uncertainty			+/-18.7							
QC1203311375	MB										
Alpha			U	-0.231	pCi/L					05/16/15	13:42
	Uncertainty			+/-1.50							
Beta			U	-0.574	pCi/L						
	Uncertainty			+/-2.46							
<b>Rad Liquid Scintillation</b>											
Batch	1475754										
QC1203310910	371595001	DUP									
Technetium-99	U	-53.1	U	-117	pCi/L	N/A		N/AMYM1		05/18/15	15:49
	Uncertainty	+/-116		+/-116							
QC1203310911	LCS										
Technetium-99	4300			3660	pCi/L		85	(75%-125%)		05/18/15	16:06
	Uncertainty			+/-228							
QC1203310909	MB										
Technetium-99			U	-129	pCi/L					05/18/15	15:32
	Uncertainty			+/-122							
Batch	1475755										
QC1203310913	371595015	DUP									
Technetium-99	U	38.7	U	-80.1	pCi/L	N/A		N/AMYM1		05/18/15	14:20
	Uncertainty	+/-98.8		+/-92.1							

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1475755										
QC1203310914	LCS										
Technetium-99	4300			4380	pCi/L		102	(75%-125%)	MYM1	05/18/15	14:36
	Uncertainty			+/-239							
QC1203310912	MB										
Technetium-99			U	-51.3	pCi/L					05/18/15	14:03
	Uncertainty			+/-96.1							

### 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 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, 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

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## QC Summary

Workorder: 371595

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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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 19 May 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



August 18, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

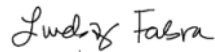
Re: Ground Water Well Liquid Analysis  
Work Order: 377742

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,



Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

VENDOR: General Engineering Laboratories (GEL)Month: JulyYear: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

377742

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/10/15 09:32	1000	X	X	X		X	REC
WELL	#3A	7/16/15 10:35	1000	X	X	X		X	REC
WELL	#7	7/13/15 11:32	1000	X	X	X		X	REC
WELL	#10	7/13/15 14:05	1000	X	X	X		X	REC
WELL	#13R	7/13/15 11:05	1000	X	X	X		X	REC
WELL	#14	7/10/15 14:22	1000	X	X	X		X	REC
WELL	#15	7/10/15 12:12	1000	X	X	X		X	REC
WELL	#16	7/10/15 14:40	1000	X	X	X		X	REC
WELL	#17	7/15/15 09:35	1000	X	X	X		X	REC
WELL	#18	7/13/15 10:10	1000	X	X	X		X	REC
WELL	#20	7/16/15 09:34	1000	X	X	X		X	REC
WELL	#22	7/13/15 09:51	1000	X	X	X		X	REC
WELL	#23R	7/10/15 13:51	1000	X	X	X		X	REC
WELL	#24	7/10/15 11:18	1000	X	X	X		X	REC
WELL	#26	7/10/15 10:10	1000	X	X	X		X	REC
WELL	#27	7/16/15 09:55	1000	X	X	X		X	REC
WELL	#28	7/13/15 10:38	1000	X	X	X		X	REC
WELL	#29	7/13/15 09:09	1000	X	X	X		X	REC
WELL	#30	7/13/15 09:30	1000	X	X	X		X	REC
WELL	#32	7/13/15 14:25	1000	X	X	X		X	REC
WELL	#33	7/10/15 08:46	1000	X	X	X		X	REC
WELL	#38	7/13/15 08:45	1000	X	X	X		X	REC
WELL	#39	7/15/15 10:09	1000	X	X	X		X	REC
WELL	#41R	7/10/15 09:53	1000	X	X	X		X	REC
WELL	#43	7/15/15 10:31	1000	X	X	X		X	REC

Please email [crewsr@westinghouse.com](mailto:crewsr@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 7/22/15

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.



## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <b>WNVC</b>		SDG/AR/COC/Work Order: <b>377742</b>	
Received By: <b>ELW</b>		Date Received: <b>7/22/15</b>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <b>0cpm</b>	
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		23°C Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <b>1304629606</b>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?		<input checked="" type="checkbox"/>		
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <u>Courier</u> Other  <b>GEL</b>

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials **JHF**Date **07/22/15**Page **1** of **1**

GL-CHL-SR-001 Rev 1

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 377742 GEL Work Order: 377742

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377742001  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:32  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.67	+/-15.4	25.4		pCi/L		MJH1	08/04/15	0853 1495870	1
Americium-241	U	18.2	+/-21.9	38.0		pCi/L					
Antimony-124	U	-1.12	+/-9.35	18.0		pCi/L					
Antimony-125	U	-7.68	+/-8.24	13.6		pCi/L					
Barium-133	U	0.346	+/-4.41	7.09		pCi/L					
Barium-140	U	-9.65	+/-42.1	73.8		pCi/L					
Beryllium-7	U	-21.9	+/-35.8	60.6		pCi/L					
Bismuth-212	U	46.1	+/-45.0	92.2		pCi/L					
Bismuth-214	UI	0.00	+/-11.9	19.3		pCi/L					
Cerium-139	U	-0.638	+/-3.02	5.15		pCi/L					
Cerium-141	U	-1.22	+/-7.62	13.1		pCi/L					
Cerium-144	U	3.42	+/-18.9	33.5		pCi/L					
Cesium-134	U	3.90	+/-5.04	7.74		pCi/L					
Cesium-136	U	8.40	+/-15.4	27.9		pCi/L					
Cesium-137	UI	0.00	+/-4.52	5.41	10.0	pCi/L					
Chromium-51	U	-14.6	+/-47.4	84.0		pCi/L					
Cobalt-56	U	-0.251	+/-3.78	7.01		pCi/L					
Cobalt-57	U	1.17	+/-2.55	4.60		pCi/L					
Cobalt-58	U	-2.78	+/-3.85	6.61		pCi/L					
Cobalt-60	U	-0.0457	+/-3.10	6.08		pCi/L					
Europium-152	U	-3.76	+/-9.42	16.6		pCi/L					
Europium-154	U	8.54	+/-9.53	20.1		pCi/L					
Europium-155	U	-1.86	+/-10.4	18.2		pCi/L					
Iridium-192	U	1.11	+/-3.85	7.10		pCi/L					
Iron-59	U	-0.275	+/-9.29	17.1		pCi/L					
Lead-210	U	609	+/-724	1380		pCi/L					
Lead-212	U	5.81	+/-8.84	11.4		pCi/L					
Lead-214	U	9.90	+/-12.9	11.5		pCi/L					
Manganese-54	U	0.354	+/-3.21	6.07		pCi/L					
Mercury-203	U	-1.38	+/-3.99	7.12		pCi/L					
Neodymium-147	U	52.0	+/-98.3	185		pCi/L					
Neptunium-239	U	17.1	+/-26.3	48.0		pCi/L					
Niobium-94	U	-2.65	+/-3.09	5.29		pCi/L					
Niobium-95	U	-1.77	+/-5.77	8.74		pCi/L					
Potassium-40	U	16.9	+/-41.1	58.6		pCi/L					
Promethium-144	U	-0.167	+/-3.49	6.44		pCi/L					

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377742001

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.07	+/-3.82	7.23	pCi/L
Radium-228	U	-5.67	+/-15.4	25.4	pCi/L
Ruthenium-106	U	-32.3	+/-30.1	47.1	pCi/L
Silver-110m	U	0.333	+/-3.01	5.11	pCi/L
Sodium-22	U	2.97	+/-3.37	7.12	pCi/L
Thallium-208	U	0.537	+/-5.66	5.14	pCi/L
Thorium-230	U	1110	+/-1700	2360	pCi/L
Thorium-234		311	+/-263	288	pCi/L
Tin-113	U	0.995	+/-4.39	8.08	pCi/L
Uranium-235	U	-3.7	+/-24.9	36.7	pCi/L
Uranium-238		311	+/-263	288	pCi/L
Yttrium-88	U	-0.603	+/-4.05	7.73	pCi/L
Zinc-65	U	-4.25	+/-7.59	13.0	pCi/L
Zirconium-95	U	-5.26	+/-7.27	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.827	+/-1.50	4.35	5.00	pCi/L	KXB2	08/13/15	1511	1497329	2
Beta		6.58	+/-3.44	5.10	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-17.6	+/-125	219	300	pCi/L	MYM1	08/11/15	2026	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 377742002  
Matrix: Ground Water  
Collect Date: 16-JUL-15 10:35  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-13.9	28.3		pCi/L		MJH1	08/04/15	0854 1495870	1
Americium-241	U	24.5	+/-27.7	47.7		pCi/L					
Antimony-124	U	0.536	+/-8.17	16.8		pCi/L					
Antimony-125	U	2.91	+/-9.33	17.2		pCi/L					
Barium-133	U	1.49	+/-5.05	8.20		pCi/L					
Barium-140	U	8.98	+/-30.4	56.6		pCi/L					
Beryllium-7	U	12.2	+/-38.6	70.4		pCi/L					
Bismuth-212	U	27.6	+/-43.3	87.7		pCi/L					
Bismuth-214	U	11.9	+/-13.7	12.7		pCi/L					
Cerium-139	U	0.574	+/-3.41	5.86		pCi/L					
Cerium-141	U	2.80	+/-8.28	13.0		pCi/L					
Cerium-144	U	-13.1	+/-22.7	37.5		pCi/L					
Cesium-134	U	4.77	+/-2.64	6.93		pCi/L					
Cesium-136	U	-4.7	+/-11.4	20.1		pCi/L					
Cesium-137	U	-3.74	+/-3.83	6.46	10.0	pCi/L					
Chromium-51	U	15.5	+/-43.5	80.2		pCi/L					
Cobalt-56	U	-1.67	+/-3.73	6.60		pCi/L					
Cobalt-57	U	2.50	+/-2.88	5.23		pCi/L					
Cobalt-58	U	-3.09	+/-3.65	6.11		pCi/L					
Cobalt-60	U	0.470	+/-3.63	7.26		pCi/L					
Europium-152	U	-13.2	+/-10.1	16.2		pCi/L					
Europium-154	U	3.69	+/-9.93	18.7		pCi/L					
Europium-155	U	2.20	+/-12.4	20.8		pCi/L					
Iridium-192	U	-2.87	+/-3.86	6.56		pCi/L					
Iron-59	U	-6.56	+/-9.94	16.7		pCi/L					
Lead-210	U	-1060	+/-1290	1900		pCi/L					
Lead-212	U	3.47	+/-9.57	13.0		pCi/L					
Lead-214	U	9.91	+/-13.7	14.1		pCi/L					
Manganese-54	U	1.92	+/-3.37	6.73		pCi/L					
Mercury-203	U	1.72	+/-4.19	7.77		pCi/L					
Neodymium-147	U	44.5	+/-71.0	135		pCi/L					
Neptunium-239	U	0.361	+/-27.7	48.1		pCi/L					
Niobium-94	U	1.15	+/-3.38	6.48		pCi/L					
Niobium-95	U	0.300	+/-3.92	7.40		pCi/L					
Potassium-40	U	-66	+/-54.6	89.1		pCi/L					
Promethium-144	U	-0.197	+/-3.24	6.02		pCi/L					



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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 377742002

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.9	+/-4.21	7.21	pCi/L
Radium-228	U	12.9	+/-13.9	28.3	pCi/L
Ruthenium-106	U	12.3	+/-29.5	57.9	pCi/L
Silver-110m	U	1.77	+/-3.16	6.30	pCi/L
Sodium-22	U	1.37	+/-3.53	6.66	pCi/L
Thallium-208	U	0.624	+/-4.57	7.26	pCi/L
Thorium-230	U	1200	+/-1660	2930	pCi/L
Thorium-234	U	106	+/-317	430	pCi/L
Tin-113	U	1.78	+/-5.17	9.45	pCi/L
Uranium-235	U	1.54	+/-28.1	39.9	pCi/L
Uranium-238	U	106	+/-317	430	pCi/L
Yttrium-88	U	2.20	+/-4.73	9.95	pCi/L
Zinc-65	U	-4.78	+/-7.24	12.1	pCi/L
Zirconium-95	U	-1.7	+/-7.70	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.24	+/-1.54	2.28	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta	U	2.58	+/-2.30	3.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-1.71	+/-125	218	300	pCi/L	MYM1	08/11/15	2043	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377742003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 11:32		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.24	+/-16.4	26.9		pCi/L		MJH1	08/04/15	0916 1495870	1
Americium-241	U	11.3	+/-14.2	23.9		pCi/L					
Antimony-124	U	-5.39	+/-7.47	12.8		pCi/L					
Antimony-125	U	5.02	+/-7.86	14.9		pCi/L					
Barium-133	U	-7.2	+/-5.60	6.50		pCi/L					
Barium-140	U	12.7	+/-37.3	68.1		pCi/L					
Beryllium-7	U	0.0597	+/-36.1	56.4		pCi/L					
Bismuth-212	U	-23.9	+/-55.9	81.3		pCi/L					
Bismuth-214	U	11.6	+/-9.71	15.2		pCi/L					
Cerium-139	U	-1.14	+/-2.89	4.81		pCi/L					
Cerium-141	U	9.73	+/-9.68	10.8		pCi/L					
Cerium-144	U	7.28	+/-18.2	32.2		pCi/L					
Cesium-134	U	1.50	+/-3.69	6.60		pCi/L					
Cesium-136	U	10.8	+/-13.5	27.0		pCi/L					
Cesium-137	U	-3.71	+/-4.13	5.40	10.0	pCi/L					
Chromium-51	U	44.2	+/-37.1	66.8		pCi/L					
Cobalt-56	U	0.324	+/-3.85	7.17		pCi/L					
Cobalt-57	U	0.676	+/-2.39	4.20		pCi/L					
Cobalt-58	U	-0.0417	+/-3.45	6.11		pCi/L					
Cobalt-60	U	0.902	+/-3.49	5.97		pCi/L					
Europium-152	U	-2.92	+/-9.11	16.0		pCi/L					
Europium-154	U	2.68	+/-8.49	16.7		pCi/L					
Europium-155	U	1.87	+/-9.46	16.6		pCi/L					
Iridium-192	U	1.03	+/-3.53	5.79		pCi/L					
Iron-59	U	-4.5	+/-8.75	15.1		pCi/L					
Lead-210	U	-283	+/-331	477		pCi/L					
Lead-212	U	9.32	+/-8.57	11.2		pCi/L					
Lead-214		17.9	+/-10.0	15.8		pCi/L					
Manganese-54	U	-2.77	+/-3.40	5.77		pCi/L					
Mercury-203	U	-0.468	+/-3.79	6.79		pCi/L					
Neodymium-147	U	-30.7	+/-78.6	135		pCi/L					
Neptunium-239	U	-5.96	+/-24.8	42.3		pCi/L					
Niobium-94	U	0.797	+/-3.10	5.86		pCi/L					
Niobium-95	U	-0.674	+/-3.39	6.21		pCi/L					
Potassium-40	U	12.2	+/-61.5	49.0		pCi/L					
Promethium-144	U	1.40	+/-3.53	6.69		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 7  
Sample ID: 377742003  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.81	+/-4.06	7.49	pCi/L
Radium-228	U	7.24	+/-16.4	26.9	pCi/L
Ruthenium-106	U	30.0	+/-32.2	61.3	pCi/L
Silver-110m	UI	0.00	+/-3.58	5.56	pCi/L
Sodium-22	U	0.950	+/-3.01	5.92	pCi/L
Thallium-208	U	3.28	+/-5.90	6.21	pCi/L
Thorium-230	U	525	+/-1360	1630	pCi/L
Thorium-234	U	-55.3	+/-149	224	pCi/L
Tin-113	U	0.212	+/-4.40	7.90	pCi/L
Uranium-235	UI	0.00	+/-26.7	25.7	pCi/L
Uranium-238	U	-55.3	+/-149	224	pCi/L
Yttrium-88	U	-4.4	+/-4.25	6.70	pCi/L
Zinc-65	U	-2.54	+/-6.76	11.9	pCi/L
Zirconium-95	U	6.79	+/-7.12	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		17.5	+/-9.58	10.5	5.00	pCi/L	KXB2	08/13/15	1511	1497329	2
Beta		102	+/-12.3	9.90	5.00	pCi/L					
Alpha	U	5.46	+/-3.66	5.80	5.00	pCi/L	KXB2	08/14/15	1922	1497329	3
Beta		119	+/-4.48	3.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	168	+/-139	230	300	pCi/L	MYM1	08/13/15	0048	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377742003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	377742004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:05		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-0.173	+/-15.6	25.9		pCi/L		MJH1	08/04/15	1138	1495870	1
Americium-241	U	-1.04	+/-10.8	17.1		pCi/L						
Antimony-124	U	0.366	+/-9.25	17.6		pCi/L						
Antimony-125	U	-1.7	+/-8.17	14.6		pCi/L						
Barium-133	U	0.913	+/-4.25	6.90		pCi/L						
Barium-140	U	-22.2	+/-36.6	63.0		pCi/L						
Beryllium-7	U	-13.5	+/-34.6	60.8		pCi/L						
Bismuth-212	U	15.7	+/-47.8	88.2		pCi/L						
Bismuth-214		15.1	+/-11.9	12.0		pCi/L						
Cerium-139	U	-1.18	+/-3.03	5.20		pCi/L						
Cerium-141	U	-8.78	+/-9.16	13.0		pCi/L						
Cerium-144	U	21.0	+/-19.5	36.0		pCi/L						
Cesium-134	U	2.27	+/-3.46	6.66		pCi/L						
Cesium-136	U	-9.28	+/-12.6	21.7		pCi/L						
Cesium-137	U	3.44	+/-7.57	6.40	10.0	pCi/L						
Chromium-51	U	48.4	+/-50.6	70.6		pCi/L						
Cobalt-56	U	-1.64	+/-3.92	6.70		pCi/L						
Cobalt-57	U	-1.39	+/-2.54	4.37		pCi/L						
Cobalt-58	U	-1.95	+/-3.55	6.01		pCi/L						
Cobalt-60	U	-1.33	+/-3.87	6.40		pCi/L						
Europium-152	U	0.161	+/-9.51	17.3		pCi/L						
Europium-154	U	-3.94	+/-10.9	17.8		pCi/L						
Europium-155	U	6.16	+/-11.0	17.8		pCi/L						
Iridium-192	U	-2.43	+/-4.62	6.25		pCi/L						
Iron-59	U	-0.808	+/-9.06	16.7		pCi/L						
Lead-210	U	15.5	+/-301	315		pCi/L						
Lead-212	U	12.3	+/-10.9	12.4		pCi/L						
Lead-214	U	14.7	+/-10.7	15.4		pCi/L						
Manganese-54	U	-3.15	+/-3.32	5.32		pCi/L						
Mercury-203	U	-1.45	+/-4.25	7.18		pCi/L						
Neodymium-147	U	17.9	+/-88.0	157		pCi/L						
Neptunium-239	U	-12.5	+/-26.2	45.3		pCi/L						
Niobium-94	U	-0.727	+/-3.25	5.69		pCi/L						
Niobium-95	U	0.921	+/-3.73	6.88		pCi/L						
Potassium-40	U	32.7	+/-59.9	60.1		pCi/L						
Promethium-144	U	-0.526	+/-3.64	6.40		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 10 Project: WNUC00129  
Sample ID: 377742004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.12	+/-3.95	7.43	pCi/L
Radium-228	U	-0.173	+/-15.6	25.9	pCi/L
Ruthenium-106	U	-2.03	+/-35.0	54.2	pCi/L
Silver-110m	U	-0.334	+/-3.90	6.00	pCi/L
Sodium-22	U	-1.35	+/-3.87	6.32	pCi/L
Thallium-208	U	1.48	+/-4.04	6.69	pCi/L
Thorium-230	U	-439	+/-904	1390	pCi/L
Thorium-234	UI	0.00	+/-199	151	pCi/L
Tin-113	U	-2.12	+/-4.10	7.20	pCi/L
Uranium-235	U	-19.1	+/-25.4	36.6	pCi/L
Uranium-238	UI	0.00	+/-199	151	pCi/L
Yttrium-88	U	-1.34	+/-3.24	6.03	pCi/L
Zinc-65	U	-9.6	+/-8.50	13.9	pCi/L
Zirconium-95	U	3.95	+/-6.31	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.85	+/-2.49	3.85	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta		70.8	+/-5.03	3.74	5.00	pCi/L					
Alpha		7.68	+/-4.31	4.99	5.00	pCi/L	KXB2	08/17/15	1502	1497329	3
Beta		230	+/-9.60	3.00	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	172	+/-136	225	300	pCi/L	MYM1	08/11/15	2116	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 377742004

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377742005  
Matrix: Ground Water  
Collect Date: 13-JUL-15 11:05  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-13.7	+/-19.6	26.4		pCi/L		MJH1	08/04/15	1139	1495870	1
Americium-241	U	1.49	+/-10.9	17.2		pCi/L						
Antimony-124	U	11.1	+/-8.47	15.8		pCi/L						
Antimony-125	U	6.77	+/-8.88	16.3		pCi/L						
Barium-133	U	2.13	+/-6.81	8.11		pCi/L						
Barium-140	U	-19.9	+/-33.7	59.0		pCi/L						
Beryllium-7	U	-22.4	+/-37.9	53.3		pCi/L						
Bismuth-212	U	38.4	+/-48.4	92.5		pCi/L						
Bismuth-214	U	0.655	+/-8.59	14.1		pCi/L						
Cerium-139	U	0.0229	+/-2.71	4.90		pCi/L						
Cerium-141	U	-1.15	+/-7.21	12.0		pCi/L						
Cerium-144	U	-14.3	+/-20.0	32.5		pCi/L						
Cesium-134	U	-1.84	+/-3.88	6.65		pCi/L						
Cesium-136	U	-8.65	+/-12.0	20.8		pCi/L						
Cesium-137	U	-3.03	+/-3.76	5.51	10.0	pCi/L						
Chromium-51	U	16.9	+/-42.3	76.2		pCi/L						
Cobalt-56	U	0.844	+/-3.94	7.19		pCi/L						
Cobalt-57	U	2.45	+/-2.34	4.21		pCi/L						
Cobalt-58	U	1.53	+/-3.50	6.62		pCi/L						
Cobalt-60	U	1.10	+/-3.34	6.48		pCi/L						
Europium-152	U	-1.0	+/-9.49	16.5		pCi/L						
Europium-154	U	-3.99	+/-9.52	16.9		pCi/L						
Europium-155	U	-2.49	+/-10.3	15.9		pCi/L						
Iridium-192	U	-2.07	+/-3.69	6.27		pCi/L						
Iron-59	U	1.29	+/-8.70	16.4		pCi/L						
Lead-210	U	32.4	+/-306	306		pCi/L						
Lead-212	U	6.66	+/-11.1	11.0		pCi/L						
Lead-214	U	-0.984	+/-9.50	13.9		pCi/L						
Manganese-54	U	-1.29	+/-3.46	5.97		pCi/L						
Mercury-203	U	0.460	+/-3.99	7.10		pCi/L						
Neodymium-147	U	41.6	+/-73.7	141		pCi/L						
Neptunium-239	U	4.45	+/-24.3	41.8		pCi/L						
Niobium-94	U	-0.176	+/-2.85	5.13		pCi/L						
Niobium-95	U	0.517	+/-4.49	7.09		pCi/L						
Potassium-40	U	-21.6	+/-52.0	88.0		pCi/L						
Promethium-144	U	2.68	+/-3.36	6.40		pCi/L						



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377742005

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-4.69	7.33	pCi/L
Radium-228	U	-13.7	+/-19.6	26.4	pCi/L
Ruthenium-106	U	-7.03	+/-29.0	51.7	pCi/L
Silver-110m	U	0.722	+/-3.01	5.59	pCi/L
Sodium-22	U	-1.46	+/-3.37	5.95	pCi/L
Thallium-208	U	-0.781	+/-4.04	6.86	pCi/L
Thorium-230	U	-97.7	+/-874	1350	pCi/L
Thorium-234	U	86.9	+/-167	156	pCi/L
Tin-113	U	2.88	+/-4.46	8.14	pCi/L
Uranium-235	U	3.52	+/-24.7	34.4	pCi/L
Uranium-238	U	86.9	+/-167	156	pCi/L
Yttrium-88	U	0.651	+/-4.07	8.04	pCi/L
Zinc-65	U	-8.01	+/-7.14	11.7	pCi/L
Zirconium-95	U	-1.91	+/-6.74	11.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.10	+/-1.74	3.06	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta		63.9	+/-4.71	3.58	5.00	pCi/L					
Alpha	U	1.74	+/-2.70	4.73	5.00	pCi/L	KXB2	08/17/15	1444	1497329	3
Beta		11.5	+/-3.26	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	72.1	+/-131	224	300	pCi/L	MYM1	08/11/15	2133	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID: WELL 13R  
Sample ID: 377742005

Project: WNUC00129  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	377742006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:22		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.94	+/-20.5	32.0		pCi/L		MJH1	08/05/15	0652 1495870	1
Americium-241	U	-3.84	+/-11.2	19.3		pCi/L					
Antimony-124	U	-0.816	+/-11.3	21.4		pCi/L					
Antimony-125	U	-2.55	+/-9.55	17.1		pCi/L					
Barium-133	U	-3.89	+/-5.58	8.24		pCi/L					
Barium-140	U	-27.7	+/-47.3	81.3		pCi/L					
Beryllium-7	U	18.4	+/-46.1	75.6		pCi/L					
Bismuth-212	U	34.0	+/-51.1	97.4		pCi/L					
Bismuth-214	U	8.05	+/-15.0	18.2		pCi/L					
Cerium-139	U	2.81	+/-3.56	5.93		pCi/L					
Cerium-141	U	3.91	+/-10.1	14.8		pCi/L					
Cerium-144	U	12.7	+/-22.1	38.5		pCi/L					
Cesium-134	U	-1.08	+/-4.58	7.74		pCi/L					
Cesium-136	U	-4.51	+/-17.2	30.9		pCi/L					
Cesium-137	U	-1.09	+/-4.59	7.37	10.0	pCi/L					
Chromium-51	U	-3.51	+/-54.5	94.3		pCi/L					
Cobalt-56	U	0.390	+/-3.91	7.41		pCi/L					
Cobalt-57	U	-0.471	+/-2.91	4.87		pCi/L					
Cobalt-58	U	-3.43	+/-4.83	8.34		pCi/L					
Cobalt-60	U	2.51	+/-4.63	9.18		pCi/L					
Europium-152	U	1.92	+/-10.8	18.9		pCi/L					
Europium-154	U	-9.3	+/-12.7	21.8		pCi/L					
Europium-155	U	4.46	+/-10.7	18.7		pCi/L					
Iridium-192	U	-0.297	+/-4.42	7.65		pCi/L					
Iron-59	U	-0.388	+/-10.2	18.6		pCi/L					
Lead-210	U	-84.6	+/-248	406		pCi/L					
Lead-212	U	9.91	+/-12.8	13.6		pCi/L					
Lead-214	U	-2.77	+/-10.2	15.9		pCi/L					
Manganese-54	U	-2.27	+/-3.50	6.08		pCi/L					
Mercury-203	U	2.24	+/-4.68	8.45		pCi/L					
Neodymium-147	U	20.1	+/-111	204		pCi/L					
Neptunium-239	U	5.61	+/-28.6	49.0		pCi/L					
Niobium-94	U	2.40	+/-4.14	7.06		pCi/L					
Niobium-95	U	3.58	+/-2.85	7.70		pCi/L					
Potassium-40	U	30.1	+/-52.7	69.7		pCi/L					
Promethium-144	U	2.58	+/-4.23	6.70		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 14 Project: WNUC00129  
Sample ID: 377742006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.32	+/-4.68	8.77	pCi/L
Radium-228	U	-4.94	+/-20.5	32.0	pCi/L
Ruthenium-106	U	17.3	+/-36.4	67.5	pCi/L
Silver-110m	U	3.40	+/-3.90	7.49	pCi/L
Sodium-22	U	-3.24	+/-4.50	7.77	pCi/L
Thallium-208	U	3.85	+/-7.66	6.68	pCi/L
Thorium-230	U	-1120	+/-1070	1450	pCi/L
Thorium-234	U	-123	+/-123	199	pCi/L
Tin-113	U	-0.333	+/-4.55	8.31	pCi/L
Uranium-235	U	8.25	+/-27.7	39.1	pCi/L
Uranium-238	U	-123	+/-123	199	pCi/L
Yttrium-88	U	-3.43	+/-4.93	8.59	pCi/L
Zinc-65	U	3.08	+/-9.02	17.0	pCi/L
Zirconium-95	U	6.27	+/-7.93	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.66	+/-1.61	2.17	5.00	pCi/L	KXB2	08/14/15	1310	1497329	2
Beta	14.5	+/-2.06	2.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	40.0	+/-132	228	300	pCi/L	MYM1	08/11/15	2150	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377742007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 12:12		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-29.5	+/-22.9	33.5		pCi/L		MJH1	08/05/15	0705 1495870	1
Americium-241	U	32.5	+/-33.4	46.2		pCi/L					
Antimony-124	U	-9.38	+/-15.1	21.2		pCi/L					
Antimony-125	U	8.23	+/-11.5	21.4		pCi/L					
Barium-133	U	5.05	+/-7.06	8.88		pCi/L					
Barium-140	U	-43.4	+/-50.7	87.3		pCi/L					
Beryllium-7	U	21.1	+/-45.6	83.4		pCi/L					
Bismuth-212	U	27.4	+/-57.1	111		pCi/L					
Bismuth-214	U	6.75	+/-13.5	14.2		pCi/L					
Cerium-139	U	0.413	+/-4.00	7.18		pCi/L					
Cerium-141	U	-1.91	+/-9.14	16.3		pCi/L					
Cerium-144	U	-27	+/-25.2	42.9		pCi/L					
Cesium-134	U	3.49	+/-4.07	7.58		pCi/L					
Cesium-136	U	36.5	+/-21.6	41.0		pCi/L					
Cesium-137	U	-3.07	+/-4.39	7.06	10.0	pCi/L					
Chromium-51	U	-54.6	+/-63.4	97.7		pCi/L					
Cobalt-56	U	-1.04	+/-5.13	9.25		pCi/L					
Cobalt-57	U	0.0326	+/-3.23	5.83		pCi/L					
Cobalt-58	U	-2.06	+/-4.62	8.15		pCi/L					
Cobalt-60	U	1.92	+/-4.13	8.58		pCi/L					
Europium-152	U	-7.17	+/-11.3	19.1		pCi/L					
Europium-154	U	-6.92	+/-12.8	22.9		pCi/L					
Europium-155	U	9.45	+/-14.0	24.5		pCi/L					
Iridium-192	U	1.98	+/-4.54	8.30		pCi/L					
Iron-59	U	-12.8	+/-10.6	15.2		pCi/L					
Lead-210	U	617	+/-967	1740		pCi/L					
Lead-212	UI	0.00	+/-13.5	11.5		pCi/L					
Lead-214	U	4.84	+/-12.1	19.2		pCi/L					
Manganese-54	U	-1.97	+/-3.99	6.98		pCi/L					
Mercury-203	U	2.51	+/-5.29	9.67		pCi/L					
Neodymium-147	U	-30.2	+/-122	223		pCi/L					
Neptunium-239	U	8.53	+/-33.7	61.6		pCi/L					
Niobium-94	U	-1.46	+/-3.84	6.83		pCi/L					
Niobium-95	U	-2.03	+/-4.73	8.38		pCi/L					
Potassium-40	U	-10.8	+/-64.6	117		pCi/L					
Promethium-144	U	2.39	+/-4.04	7.84		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 15 Project: WNUC00129  
Sample ID: 377742007 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.08	+/-5.18	8.30	pCi/L
Radium-228	U	-29.5	+/-22.9	33.5	pCi/L
Ruthenium-106	U	3.18	+/-37.0	69.1	pCi/L
Silver-110m	U	2.28	+/-3.84	7.54	pCi/L
Sodium-22	U	-3.17	+/-4.61	8.09	pCi/L
Thallium-208	U	3.69	+/-5.66	6.98	pCi/L
Thorium-230	U	474	+/-1760	2740	pCi/L
Thorium-234	U	173	+/-266	346	pCi/L
Tin-113	U	5.88	+/-8.59	9.63	pCi/L
Uranium-235	U	-21.1	+/-28.9	43.7	pCi/L
Uranium-238	U	173	+/-266	346	pCi/L
Yttrium-88	U	3.35	+/-5.46	11.7	pCi/L
Zinc-65	U	5.34	+/-10.7	18.6	pCi/L
Zirconium-95	U	2.30	+/-8.43	16.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.12	+/-3.43	4.87	5.00	pCi/L	KXB2	08/13/15	1515	1497329	2
Beta		209	+/-11.9	4.82	5.00	pCi/L					
Alpha	U	-1.17	+/-1.57	3.04	5.00	pCi/L	KXB2	08/14/15	1310	1497329	3
Beta		188	+/-5.30	3.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	182	+/-138	228	300	pCi/L	MYM1	08/13/15	0104	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377742007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	377742008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:40		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	1.80	+/-20.6	24.7		pCi/L		MJH1	08/05/15	0706	1495870	1
Americium-241	U	8.61	+/-10.7	17.7		pCi/L						
Antimony-124	U	-5.44	+/-9.67	17.2		pCi/L						
Antimony-125	U	-2.9	+/-8.36	14.2		pCi/L						
Barium-133	U	-0.31	+/-5.34	8.37		pCi/L						
Barium-140	U	5.39	+/-66.0	72.5		pCi/L						
Beryllium-7	U	3.31	+/-35.7	62.4		pCi/L						
Bismuth-212	U	39.3	+/-65.3	91.9		pCi/L						
Bismuth-214	U	12.0	+/-11.2	12.5		pCi/L						
Cerium-139	U	-1.08	+/-2.87	5.08		pCi/L						
Cerium-141	U	5.05	+/-7.75	13.5		pCi/L						
Cerium-144	U	8.30	+/-19.3	33.4		pCi/L						
Cesium-134	U	2.18	+/-3.73	7.04		pCi/L						
Cesium-136	U	-8.84	+/-18.6	27.9		pCi/L						
Cesium-137	U	0.533	+/-4.15	6.79	10.0	pCi/L						
Chromium-51	U	-7.46	+/-47.7	82.9		pCi/L						
Cobalt-56	U	-3.49	+/-4.03	6.60		pCi/L						
Cobalt-57	U	0.319	+/-2.49	4.26		pCi/L						
Cobalt-58	U	-2.92	+/-4.04	6.76		pCi/L						
Cobalt-60	U	0.109	+/-3.53	6.58		pCi/L						
Europium-152	U	2.50	+/-9.34	15.6		pCi/L						
Europium-154	U	2.09	+/-8.76	17.0		pCi/L						
Europium-155	U	5.28	+/-10.6	17.1		pCi/L						
Iridium-192	U	-1.2	+/-3.77	6.51		pCi/L						
Iron-59	U	3.08	+/-7.95	15.3		pCi/L						
Lead-210	U	-71.6	+/-241	382		pCi/L						
Lead-212	U	0.844	+/-8.19	10.9		pCi/L						
Lead-214	U	-1.56	+/-9.47	13.8		pCi/L						
Manganese-54	U	-1.47	+/-3.37	5.79		pCi/L						
Mercury-203	U	-1.85	+/-4.14	7.13		pCi/L						
Neodymium-147	U	-45.4	+/-104	158		pCi/L						
Neptunium-239	U	-15.9	+/-25.4	41.8		pCi/L						
Niobium-94	U	3.48	+/-6.00	5.55		pCi/L						
Niobium-95	U	4.20	+/-4.10	8.01		pCi/L						
Potassium-40	U	-13.6	+/-48.5	83.3		pCi/L						
Promethium-144	U	1.28	+/-3.90	6.29		pCi/L						



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 16  
Sample ID: 377742008

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.996	+/-3.84	6.56	pCi/L
Radium-228	U	1.80	+/-20.6	24.7	pCi/L
Ruthenium-106	U	-16.9	+/-28.6	49.4	pCi/L
Silver-110m	U	-0.593	+/-3.19	5.70	pCi/L
Sodium-22	U	0.789	+/-3.12	6.05	pCi/L
Thallium-208	U	1.55	+/-3.72	5.58	pCi/L
Thorium-230	U	375	+/-888	1420	pCi/L
Thorium-234	U	128	+/-166	162	pCi/L
Tin-113	U	-0.801	+/-4.58	7.90	pCi/L
Uranium-235	U	8.67	+/-24.2	34.2	pCi/L
Uranium-238	U	128	+/-166	162	pCi/L
Yttrium-88	U	1.06	+/-3.88	7.86	pCi/L
Zinc-65	U	5.48	+/-8.23	14.5	pCi/L
Zirconium-95	U	1.40	+/-7.95	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.59	+/-1.28	1.54	5.00	pCi/L	KXB2	08/14/15	1310	1497329	2
Beta	15.7	+/-2.12	2.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-45.4	+/-127	225	300	pCi/L	MYM1	08/11/15	2223	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009  
Matrix: Ground Water  
Collect Date: 15-JUL-15 09:35  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.36	+/-16.0	24.0		pCi/L		MJH1	08/05/15	0706 1495870	1
Americium-241	U	7.93	+/-17.6	31.9		pCi/L					
Antimony-124	U	0.536	+/-7.56	15.2		pCi/L					
Antimony-125	U	-0.402	+/-8.77	15.7		pCi/L					
Barium-133	U	-0.0681	+/-4.44	7.04		pCi/L					
Barium-140	U	29.1	+/-34.0	64.9		pCi/L					
Beryllium-7	U	19.0	+/-33.8	62.8		pCi/L					
Bismuth-212	U	31.6	+/-42.3	84.6		pCi/L					
Bismuth-214	U	8.57	+/-10.4	11.4		pCi/L					
Cerium-139	U	-1.49	+/-3.52	5.20		pCi/L					
Cerium-141	U	-0.0819	+/-7.23	12.4		pCi/L					
Cerium-144	U	13.8	+/-19.7	35.3		pCi/L					
Cesium-134	U	-0.207	+/-3.21	5.99		pCi/L					
Cesium-136	U	-4.61	+/-13.0	23.1		pCi/L					
Cesium-137	U	-2.3	+/-3.72	6.18	10.0	pCi/L					
Chromium-51	U	-17.6	+/-43.3	76.1		pCi/L					
Cobalt-56	U	0.843	+/-3.53	6.74		pCi/L					
Cobalt-57	U	2.09	+/-2.72	4.88		pCi/L					
Cobalt-58	U	1.47	+/-3.43	6.03		pCi/L					
Cobalt-60	U	-2.92	+/-3.82	5.85		pCi/L					
Europium-152	U	5.86	+/-8.95	16.8		pCi/L					
Europium-154	U	-0.745	+/-9.76	17.9		pCi/L					
Europium-155	U	-7.6	+/-10.6	17.8		pCi/L					
Iridium-192	U	0.550	+/-3.50	6.39		pCi/L					
Iron-59	U	-1.45	+/-8.11	14.7		pCi/L					
Lead-210	U	33.9	+/-713	706		pCi/L					
Lead-212	U	1.92	+/-9.74	11.3		pCi/L					
Lead-214	U	5.55	+/-11.6	14.9		pCi/L					
Manganese-54	U	-0.956	+/-4.79	6.87		pCi/L					
Mercury-203	U	0.577	+/-4.14	7.54		pCi/L					
Neodymium-147	U	-25.2	+/-72.4	126		pCi/L					
Neptunium-239	U	-20.5	+/-27.3	45.6		pCi/L					
Niobium-94	U	2.78	+/-3.32	6.25		pCi/L					
Niobium-95	U	1.00	+/-3.97	6.69		pCi/L					
Potassium-40	U	17.6	+/-61.8	65.9		pCi/L					
Promethium-144	U	-1.77	+/-3.47	5.81		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0954	+/-4.08	7.29	pCi/L
Radium-228	U	-6.36	+/-16.0	24.0	pCi/L
Ruthenium-106	U	-7.57	+/-29.1	50.5	pCi/L
Silver-110m	U	0.493	+/-3.38	6.06	pCi/L
Sodium-22	U	-0.166	+/-3.47	6.38	pCi/L
Thallium-208	U	0.602	+/-4.40	7.28	pCi/L
Thorium-230	U	464	+/-1140	2050	pCi/L
Thorium-234	U	-144	+/-196	295	pCi/L
Tin-113	U	1.30	+/-4.40	8.06	pCi/L
Uranium-235	U	-7.81	+/-24.6	36.4	pCi/L
Uranium-238	U	-144	+/-196	295	pCi/L
Yttrium-88	U	-2.8	+/-3.35	5.58	pCi/L
Zinc-65	U	0.0229	+/-6.47	10.6	pCi/L
Zirconium-95	U	-5.86	+/-6.74	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.23	+/-2.53	4.72	5.00	pCi/L	KXB2	08/13/15	1513	1497329	2
Beta		498	+/-18.1	4.97	5.00	pCi/L					
Alpha	U	1.52	+/-1.53	2.51	5.00	pCi/L	KXB2	08/14/15	1311	1497329	3
Beta		455	+/-7.95	2.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	663	+/-155	225	300	pCi/L	MYM1	08/11/15	2240	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	377742010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.1	+/-24.8	32.0		pCi/L		MJH1	08/05/15	0715 1495870	1
Americium-241	U	-12.6	+/-16.6	25.1		pCi/L					
Antimony-124	U	1.51	+/-10.9	21.0		pCi/L					
Antimony-125	U	-3.58	+/-9.52	16.3		pCi/L					
Barium-133	U	3.63	+/-4.50	7.63		pCi/L					
Barium-140	U	32.4	+/-40.4	76.4		pCi/L					
Beryllium-7	U	-13.2	+/-46.1	68.2		pCi/L					
Bismuth-212	UI	0.00	+/-83.6	94.5		pCi/L					
Bismuth-214	U	-0.83	+/-9.14	15.6		pCi/L					
Cerium-139	U	-1.95	+/-3.23	5.29		pCi/L					
Cerium-141	U	5.12	+/-8.10	12.9		pCi/L					
Cerium-144	U	4.15	+/-21.1	36.6		pCi/L					
Cesium-134	U	2.21	+/-4.27	7.10		pCi/L					
Cesium-136	U	-3.93	+/-16.8	25.3		pCi/L					
Cesium-137	U	2.80	+/-6.46	6.12	10.0	pCi/L					
Chromium-51	U	12.1	+/-46.5	84.3		pCi/L					
Cobalt-56	U	-2.65	+/-4.02	6.82		pCi/L					
Cobalt-57	U	0.726	+/-2.70	4.73		pCi/L					
Cobalt-58	U	4.87	+/-5.36	6.33		pCi/L					
Cobalt-60	U	1.70	+/-3.77	7.53		pCi/L					
Europium-152	U	-2.59	+/-9.61	16.8		pCi/L					
Europium-154	U	1.78	+/-10.0	19.5		pCi/L					
Europium-155	U	10.9	+/-10.1	18.7		pCi/L					
Iridium-192	U	-0.921	+/-3.72	6.53		pCi/L					
Iron-59	U	3.38	+/-7.51	15.3		pCi/L					
Lead-210	U	-237	+/-401	615		pCi/L					
Lead-212	U	3.77	+/-12.9	13.0		pCi/L					
Lead-214	U	12.2	+/-15.3	15.7		pCi/L					
Manganese-54	U	1.87	+/-3.43	6.63		pCi/L					
Mercury-203	U	2.55	+/-4.22	7.85		pCi/L					
Neodymium-147	U	-97.6	+/-93.6	148		pCi/L					
Neptunium-239	U	8.86	+/-26.6	46.9		pCi/L					
Niobium-94	U	-4.66	+/-3.97	5.89		pCi/L					
Niobium-95	U	1.34	+/-3.91	7.44		pCi/L					
Potassium-40	U	20.3	+/-46.3	58.4		pCi/L					
Promethium-144	U	1.45	+/-3.50	5.94		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 377742010  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.384	+/-4.45	7.78	pCi/L
Radium-228	U	13.1	+/-24.8	32.0	pCi/L
Ruthenium-106	U	9.07	+/-31.3	59.2	pCi/L
Silver-110m	U	-0.387	+/-4.12	6.49	pCi/L
Sodium-22	U	1.27	+/-3.49	6.97	pCi/L
Thallium-208	U	-0.751	+/-4.56	7.41	pCi/L
Thorium-230	U	103	+/-1190	1890	pCi/L
Thorium-234	U	142	+/-187	216	pCi/L
Tin-113	U	0.0652	+/-4.82	8.56	pCi/L
Uranium-235	U	5.31	+/-23.6	35.6	pCi/L
Uranium-238	U	142	+/-187	216	pCi/L
Yttrium-88	U	-1.73	+/-4.06	7.50	pCi/L
Zinc-65	U	-4.49	+/-8.43	12.5	pCi/L
Zirconium-95	U	-0.452	+/-6.65	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		16.6	+/-7.28	10.3	5.00	pCi/L	KXB2	08/14/15	1926	1497329	2
Beta		171	+/-8.69	6.93	5.00	pCi/L					
Alpha	U	10.7	+/-8.50	13.7	5.00	pCi/L	KXB2	08/17/15	1943	1497329	3
Beta		188	+/-10.9	12.4	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99		267	+/-138	221	300	pCi/L	MYM1	08/11/15	2257	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 377742010

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	377742011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:34		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.4	+/-12.9	26.9		pCi/L		MJH1	08/05/15	0716 1495870	1
Americium-241	U	42.9	+/-29.1	51.9		pCi/L					
Antimony-124	U	-4.63	+/-11.9	21.4		pCi/L					
Antimony-125	U	-0.584	+/-10.2	18.0		pCi/L					
Barium-133	U	-1.17	+/-5.26	8.06		pCi/L					
Barium-140	U	9.44	+/-34.5	63.6		pCi/L					
Beryllium-7	U	-1.93	+/-53.1	59.2		pCi/L					
Bismuth-212	U	53.1	+/-44.5	94.5		pCi/L					
Bismuth-214		15.9	+/-13.7	12.5		pCi/L					
Cerium-139	U	1.19	+/-3.29	5.73		pCi/L					
Cerium-141	U	6.80	+/-7.62	13.7		pCi/L					
Cerium-144	U	-12.3	+/-22.6	37.5		pCi/L					
Cesium-134	U	-1.05	+/-4.01	6.57		pCi/L					
Cesium-136	U	-1.2	+/-13.8	25.3		pCi/L					
Cesium-137	U	0.996	+/-3.43	6.64	10.0	pCi/L					
Chromium-51	U	29.9	+/-45.4	85.2		pCi/L					
Cobalt-56	U	6.54	+/-4.40	8.37		pCi/L					
Cobalt-57	U	-0.904	+/-3.40	5.10		pCi/L					
Cobalt-58	U	-1.03	+/-4.66	7.27		pCi/L					
Cobalt-60	U	0.122	+/-3.91	7.62		pCi/L					
Europium-152	U	-2.09	+/-10.6	18.6		pCi/L					
Europium-154	U	-4.37	+/-11.5	21.1		pCi/L					
Europium-155	U	-1.33	+/-12.0	18.5		pCi/L					
Iridium-192	U	2.08	+/-4.53	7.47		pCi/L					
Iron-59	U	-1.1	+/-8.69	15.9		pCi/L					
Lead-210	U	1580	+/-1790	1760		pCi/L					
Lead-212	U	-0.383	+/-8.65	12.3		pCi/L					
Lead-214		16.9	+/-13.5	16.6		pCi/L					
Manganese-54	U	-0.999	+/-3.36	6.07		pCi/L					
Mercury-203	U	-0.653	+/-4.39	7.83		pCi/L					
Neodymium-147	U	112	+/-79.2	160		pCi/L					
Neptunium-239	U	-0.436	+/-33.4	51.4		pCi/L					
Niobium-94	U	2.95	+/-3.26	6.60		pCi/L					
Niobium-95	U	0.445	+/-3.85	7.33		pCi/L					
Potassium-40	U	35.9	+/-54.9	64.6		pCi/L					
Promethium-144	U	-1.91	+/-3.60	6.33		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 20 Project: WNUC00129  
Sample ID: 377742011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.93	+/-4.63	7.25	pCi/L
Radium-228	U	12.4	+/-12.9	26.9	pCi/L
Ruthenium-106	U	-1.65	+/-31.7	59.1	pCi/L
Silver-110m	U	0.589	+/-3.34	6.38	pCi/L
Sodium-22	U	-1.68	+/-4.05	7.38	pCi/L
Thallium-208	U	2.88	+/-4.76	6.28	pCi/L
Thorium-230	U	283	+/-2570	2520	pCi/L
Thorium-234	U	45.2	+/-310	435	pCi/L
Tin-113	U	1.96	+/-4.75	8.81	pCi/L
Uranium-235	U	-8.54	+/-25.5	38.3	pCi/L
Uranium-238	U	45.2	+/-310	435	pCi/L
Yttrium-88	U	1.78	+/-4.45	9.39	pCi/L
Zinc-65	U	-3.84	+/-8.97	15.5	pCi/L
Zirconium-95	U	2.64	+/-6.51	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.255	+/-1.38	2.53	5.00	pCi/L	KXB2	08/14/15	1311	1497329	2
Beta	U	1.72	+/-1.53	2.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	32.4	+/-130	225	300	pCi/L	MYM1	08/16/15	0933	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	377742012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:51		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.99	+/-20.1	32.8		pCi/L		MJH1	08/05/15	0723 1495870	1
Americium-241	U	7.59	+/-6.23	10.5		pCi/L					
Antimony-124	U	1.37	+/-11.3	22.7		pCi/L					
Antimony-125	U	8.59	+/-9.57	18.6		pCi/L					
Barium-133	U	0.852	+/-5.18	8.35		pCi/L					
Barium-140	U	-10.6	+/-50.8	89.0		pCi/L					
Beryllium-7	U	-17	+/-48.1	72.0		pCi/L					
Bismuth-212	U	18.7	+/-59.3	112		pCi/L					
Bismuth-214		18.1	+/-13.2	14.0		pCi/L					
Cerium-139	U	-0.354	+/-3.49	5.44		pCi/L					
Cerium-141	U	8.15	+/-8.29	13.9		pCi/L					
Cerium-144	U	11.5	+/-20.8	35.9		pCi/L					
Cesium-134	U	-0.252	+/-5.30	8.34		pCi/L					
Cesium-136	U	-8.1	+/-15.9	27.3		pCi/L					
Cesium-137	U	4.31	+/-6.16	5.76	10.0	pCi/L					
Chromium-51	U	-18	+/-54.5	91.9		pCi/L					
Cobalt-56	U	0.680	+/-5.63	9.37		pCi/L					
Cobalt-57	U	0.769	+/-2.58	4.42		pCi/L					
Cobalt-58	U	-4.25	+/-5.20	7.60		pCi/L					
Cobalt-60	U	0.448	+/-4.36	8.35		pCi/L					
Europium-152	U	2.88	+/-11.3	19.8		pCi/L					
Europium-154	U	-7.02	+/-11.4	19.8		pCi/L					
Europium-155	U	-0.659	+/-10.7	16.1		pCi/L					
Iridium-192	U	4.49	+/-4.54	8.32		pCi/L					
Iron-59	U	-1.1	+/-10.9	19.6		pCi/L					
Lead-210	U	12.1	+/-91.5	93.6		pCi/L					
Lead-212	U	2.52	+/-9.56	10.4		pCi/L					
Lead-214	U	8.47	+/-12.9	16.3		pCi/L					
Manganese-54	U	0.197	+/-4.05	7.49		pCi/L					
Mercury-203	U	1.29	+/-4.93	8.70		pCi/L					
Neodymium-147	U	-10.3	+/-111	197		pCi/L					
Neptunium-239	U	24.3	+/-29.9	46.6		pCi/L					
Niobium-94	U	0.248	+/-3.78	7.01		pCi/L					
Niobium-95	U	-1.41	+/-5.43	9.00		pCi/L					
Potassium-40	U	11.5	+/-63.2	112		pCi/L					
Promethium-144	U	3.12	+/-4.12	8.04		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 22 Project: WNUC00129  
Sample ID: 377742012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.103	+/-4.94	8.91	pCi/L
Radium-228	U	4.99	+/-20.1	32.8	pCi/L
Ruthenium-106	U	0.849	+/-38.5	68.5	pCi/L
Silver-110m	U	2.96	+/-4.43	7.25	pCi/L
Sodium-22	U	-3.8	+/-4.20	6.99	pCi/L
Thallium-208	U	2.26	+/-4.83	8.29	pCi/L
Thorium-230	U	-123	+/-666	960	pCi/L
Thorium-234	U	82.4	+/-101	102	pCi/L
Tin-113	U	0.693	+/-5.31	9.70	pCi/L
Uranium-235	U	4.73	+/-30.1	33.3	pCi/L
Uranium-238	U	82.4	+/-101	102	pCi/L
Yttrium-88	U	-1.78	+/-5.04	9.32	pCi/L
Zinc-65	U	-2.9	+/-10.7	18.6	pCi/L
Zirconium-95	U	-7.92	+/-9.15	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.75	+/-3.34	4.96	5.00	pCi/L	KXB2	08/14/15	1316	1497329	2
Beta	42.5	+/-3.25	3.07	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.39	+/-128	222	300	pCi/L	MYM1	08/16/15	0950	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377742013  
Matrix: Ground Water  
Collect Date: 10-JUL-15 13:51  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.21	+/-25.6	38.2		pCi/L		MJH1	08/05/15	0731 1495870	1
Americium-241	U	2.45	+/-6.94	11.4		pCi/L					
Antimony-124	U	-21.6	+/-18.9	23.9		pCi/L					
Antimony-125	U	-0.321	+/-11.9	21.0		pCi/L					
Barium-133	U	1.49	+/-5.52	8.87		pCi/L					
Barium-140	U	-41.5	+/-69.5	110		pCi/L					
Beryllium-7	U	36.7	+/-48.3	90.8		pCi/L					
Bismuth-212	U	11.1	+/-76.6	125		pCi/L					
Bismuth-214	UI	0.00	+/-16.9	15.7		pCi/L					
Cerium-139	U	-2.89	+/-3.18	5.51		pCi/L					
Cerium-141	UI	0.00	+/-14.1	13.3		pCi/L					
Cerium-144	U	17.2	+/-21.8	37.4		pCi/L					
Cesium-134	U	2.19	+/-5.31	10.2		pCi/L					
Cesium-136	U	3.65	+/-19.1	36.9		pCi/L					
Cesium-137	U	0.864	+/-5.57	8.89	10.0	pCi/L					
Chromium-51	U	38.8	+/-57.4	107		pCi/L					
Cobalt-56	U	5.38	+/-6.89	10.1		pCi/L					
Cobalt-57	U	1.86	+/-2.68	4.79		pCi/L					
Cobalt-58	U	2.41	+/-5.51	10.6		pCi/L					
Cobalt-60	U	1.15	+/-3.76	7.89		pCi/L					
Europium-152	U	-0.564	+/-11.7	20.8		pCi/L					
Europium-154	U	-1.92	+/-14.6	27.3		pCi/L					
Europium-155	U	-1.02	+/-10.6	18.2		pCi/L					
Iridium-192	U	1.63	+/-4.54	8.31		pCi/L					
Iron-59	U	-7.97	+/-12.7	22.3		pCi/L					
Lead-210	U	12.8	+/-102	98.4		pCi/L					
Lead-212	U	10.4	+/-12.8	11.8		pCi/L					
Lead-214	U	14.1	+/-16.0	20.0		pCi/L					
Manganese-54	U	-4.24	+/-4.72	7.73		pCi/L					
Mercury-203	U	4.72	+/-7.62	8.51		pCi/L					
Neodymium-147	U	108	+/-110	259		pCi/L					
Neptunium-239	U	14.9	+/-26.6	47.3		pCi/L					
Niobium-94	U	0.224	+/-4.33	7.98		pCi/L					
Niobium-95	U	-0.283	+/-5.56	10.2		pCi/L					
Potassium-40	U	4.04	+/-59.4	81.3		pCi/L					
Promethium-144	U	-2.23	+/-4.66	8.15		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377742013

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.604	+/-5.14	9.21	pCi/L
Radium-228	U	-4.21	+/-25.6	38.2	pCi/L
Ruthenium-106	U	16.1	+/-41.8	79.7	pCi/L
Silver-110m	U	-1.87	+/-4.23	7.50	pCi/L
Sodium-22	U	-0.598	+/-5.18	9.72	pCi/L
Thallium-208	U	-0.157	+/-5.94	10.7	pCi/L
Thorium-230	U	314	+/-669	1020	pCi/L
Thorium-234	U	-24.7	+/-90.7	138	pCi/L
Tin-113	U	3.82	+/-5.53	10.4	pCi/L
Uranium-235	U	21.9	+/-29.8	37.9	pCi/L
Uranium-238	U	-24.7	+/-90.7	138	pCi/L
Yttrium-88	U	1.73	+/-6.42	13.3	pCi/L
Zinc-65	U	1.49	+/-10.8	18.5	pCi/L
Zirconium-95	U	-0.0979	+/-9.36	17.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.134	+/-1.94	4.31	5.00	pCi/L	KXB2	08/13/15	1643	1497329	2
Beta	U	3.59	+/-2.95	4.74	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	113	+/-134	225	300	pCi/L	MYM1	08/16/15	1007	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	377742014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:18		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.39	+/-18.5	22.7		pCi/L		MJH1	08/05/15	0732 1495870	1
Americium-241	U	1.98	+/-13.7	22.1		pCi/L					
Antimony-124	U	6.18	+/-9.81	20.7		pCi/L					
Antimony-125	U	-3.52	+/-8.19	14.2		pCi/L					
Barium-133	U	-4.73	+/-5.44	6.59		pCi/L					
Barium-140	U	0.848	+/-40.7	73.0		pCi/L					
Beryllium-7	U	30.9	+/-37.1	63.9		pCi/L					
Bismuth-212	U	-0.293	+/-58.8	91.1		pCi/L					
Bismuth-214	UI	0.00	+/-13.2	16.6		pCi/L					
Cerium-139	U	-2.39	+/-3.00	4.87		pCi/L					
Cerium-141	U	0.659	+/-7.47	12.8		pCi/L					
Cerium-144	U	3.08	+/-19.0	33.0		pCi/L					
Cesium-134	U	-0.944	+/-3.75	6.78		pCi/L					
Cesium-136	U	4.10	+/-17.6	33.0		pCi/L					
Cesium-137	U	-2.77	+/-4.07	6.03	10.0	pCi/L					
Chromium-51	U	16.8	+/-44.7	82.4		pCi/L					
Cobalt-56	U	4.26	+/-4.72	6.65		pCi/L					
Cobalt-57	U	1.08	+/-2.38	4.22		pCi/L					
Cobalt-58	U	3.06	+/-3.60	7.30		pCi/L					
Cobalt-60	U	1.99	+/-3.19	6.50		pCi/L					
Europium-152	U	6.26	+/-9.35	17.5		pCi/L					
Europium-154	U	4.14	+/-9.97	19.4		pCi/L					
Europium-155	U	5.71	+/-12.4	17.1		pCi/L					
Iridium-192	U	-3.1	+/-3.74	6.35		pCi/L					
Iron-59	U	-1.49	+/-8.60	15.6		pCi/L					
Lead-210	U	48.4	+/-404	464		pCi/L					
Lead-212	U	4.89	+/-8.95	11.6		pCi/L					
Lead-214	U	10.9	+/-10.7	14.7		pCi/L					
Manganese-54	U	-0.901	+/-2.91	5.26		pCi/L					
Mercury-203	U	-0.531	+/-4.09	7.31		pCi/L					
Neodymium-147	U	-7.02	+/-89.7	160		pCi/L					
Neptunium-239	U	5.35	+/-24.9	43.6		pCi/L					
Niobium-94	U	0.533	+/-3.52	5.77		pCi/L					
Niobium-95	U	-0.0138	+/-3.89	7.23		pCi/L					
Potassium-40	U	-30.9	+/-50.6	80.3		pCi/L					
Promethium-144	U	-0.539	+/-3.58	5.68		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	377742014	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.36	+/-3.93	7.35	pCi/L
Radium-228	U	7.39	+/-18.5	22.7	pCi/L
Ruthenium-106	U	33.3	+/-32.6	47.9	pCi/L
Silver-110m	U	-1.44	+/-2.89	5.17	pCi/L
Sodium-22	U	1.62	+/-3.56	6.95	pCi/L
Thallium-208	U	0.618	+/-4.40	7.29	pCi/L
Thorium-230	U	-99.3	+/-924	1620	pCi/L
Thorium-234	U	39.0	+/-186	201	pCi/L
Tin-113	U	-2.48	+/-4.26	7.30	pCi/L
Uranium-235	U	-7.16	+/-22.9	32.9	pCi/L
Uranium-238	U	39.0	+/-186	201	pCi/L
Yttrium-88	U	0.328	+/-4.18	8.21	pCi/L
Zinc-65	U	-8.34	+/-7.54	11.9	pCi/L
Zirconium-95	U	1.81	+/-7.02	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.712	+/-1.08	1.89	5.00	pCi/L	KXB2	08/14/15	1316	1497329	2
Beta	U	1.97	+/-1.56	2.56	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-30.6	+/-125	220	300	pCi/L	MYM1	08/16/15	1023	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377742015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.697	+/-15.8	25.3		pCi/L		MJH1	08/05/15	1142 1495870	1
Americium-241	U	31.0	+/-30.9	52.9		pCi/L					
Antimony-124	U	2.16	+/-10.4	21.3		pCi/L					
Antimony-125	U	12.1	+/-14.5	18.8		pCi/L					
Barium-133	U	0.760	+/-4.89	7.84		pCi/L					
Barium-140	U	-22.1	+/-49.2	83.4		pCi/L					
Beryllium-7	U	60.0	+/-42.3	83.9		pCi/L					
Bismuth-212	U	-6.53	+/-47.4	87.6		pCi/L					
Bismuth-214	U	3.81	+/-11.6	16.3		pCi/L					
Cerium-139	U	-1.42	+/-3.63	6.02		pCi/L					
Cerium-141	U	7.47	+/-9.80	15.8		pCi/L					
Cerium-144	U	16.4	+/-23.5	41.9		pCi/L					
Cesium-134	U	-1.11	+/-3.99	7.20		pCi/L					
Cesium-136	U	-5.48	+/-19.0	33.8		pCi/L					
Cesium-137	U	-1.31	+/-3.71	6.70	10.0	pCi/L					
Chromium-51	U	23.0	+/-51.1	94.9		pCi/L					
Cobalt-56	U	-0.155	+/-4.63	8.54		pCi/L					
Cobalt-57	U	0.263	+/-2.98	5.17		pCi/L					
Cobalt-58	U	0.00718	+/-4.56	8.46		pCi/L					
Cobalt-60	U	0.741	+/-3.56	6.48		pCi/L					
Europium-152	U	-0.565	+/-10.3	18.5		pCi/L					
Europium-154	U	1.51	+/-10.2	20.5		pCi/L					
Europium-155	U	-2.88	+/-12.2	20.9		pCi/L					
Iridium-192	U	-1.21	+/-4.04	7.12		pCi/L					
Iron-59	U	2.69	+/-9.64	18.7		pCi/L					
Lead-210	U	-703	+/-1360	2080		pCi/L					
Lead-212	U	6.84	+/-10.6	13.0		pCi/L					
Lead-214	U	8.61	+/-12.7	14.2		pCi/L					
Manganese-54	U	0.612	+/-3.24	6.25		pCi/L					
Mercury-203	U	-2.67	+/-4.47	7.73		pCi/L					
Neodymium-147	U	-162	+/-108	158		pCi/L					
Neptunium-239	U	-41.2	+/-31.4	49.8		pCi/L					
Niobium-94	U	-0.39	+/-3.37	6.19		pCi/L					
Niobium-95	U	1.47	+/-4.75	9.07		pCi/L					
Potassium-40	U	-46.8	+/-54.5	93.3		pCi/L					
Promethium-144	U	0.198	+/-3.37	6.34		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377742015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.08	+/-4.06	7.11	pCi/L
Radium-228	U	-0.697	+/-15.8	25.3	pCi/L
Ruthenium-106	U	22.5	+/-34.0	67.0	pCi/L
Silver-110m	U	3.49	+/-3.68	7.45	pCi/L
Sodium-22	U	0.603	+/-3.64	7.30	pCi/L
Thallium-208	U	0.385	+/-4.87	7.74	pCi/L
Thorium-230	U	63.7	+/-1820	2870	pCi/L
Thorium-234	U	29.6	+/-339	456	pCi/L
Tin-113	U	5.88	+/-4.72	8.71	pCi/L
Uranium-235	U	11.7	+/-28.2	36.8	pCi/L
Uranium-238	U	29.6	+/-339	456	pCi/L
Yttrium-88	U	2.91	+/-4.11	9.38	pCi/L
Zinc-65	U	-9.39	+/-11.6	15.4	pCi/L
Zirconium-95	U	-0.0422	+/-8.19	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.12	+/-1.04	1.68	5.00	pCi/L	KXB2	08/14/15	1311	1497329	2
Beta		12.5	+/-2.09	2.87	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-14.9	+/-135	237	300	pCi/L	MYM1	08/16/15	1040	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 27  
Sample ID: 377742016  
Matrix: Ground Water  
Collect Date: 16-JUL-15 09:55  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.7	+/-22.5	30.7		pCi/L		MJH1	08/05/15	1147 1495870	1
Americium-241	U	9.42	+/-15.2	25.4		pCi/L					
Antimony-124	U	-7.64	+/-11.4	19.0		pCi/L					
Antimony-125	U	2.50	+/-8.66	15.8		pCi/L					
Barium-133	U	0.517	+/-4.90	7.71		pCi/L					
Barium-140	U	-1.06	+/-36.1	63.1		pCi/L					
Beryllium-7	U	2.76	+/-33.8	60.2		pCi/L					
Bismuth-212	U	65.9	+/-47.5	98.2		pCi/L					
Bismuth-214		19.3	+/-12.4	10.6		pCi/L					
Cerium-139	U	-1.08	+/-3.31	5.50		pCi/L					
Cerium-141	U	1.25	+/-6.92	12.0		pCi/L					
Cerium-144	U	0.726	+/-19.8	34.1		pCi/L					
Cesium-134	U	-1.16	+/-4.29	6.58		pCi/L					
Cesium-136	U	0.0198	+/-13.8	25.0		pCi/L					
Cesium-137	U	0.329	+/-5.96	6.60	10.0	pCi/L					
Chromium-51	U	17.2	+/-42.5	77.8		pCi/L					
Cobalt-56	U	1.64	+/-4.27	8.05		pCi/L					
Cobalt-57	U	0.406	+/-2.60	4.53		pCi/L					
Cobalt-58	U	0.288	+/-4.41	7.08		pCi/L					
Cobalt-60	U	0.0146	+/-3.68	6.99		pCi/L					
Europium-152	U	1.63	+/-9.69	17.5		pCi/L					
Europium-154	U	6.06	+/-9.29	19.4		pCi/L					
Europium-155	U	-6.54	+/-11.0	18.4		pCi/L					
Iridium-192	U	0.588	+/-3.57	6.47		pCi/L					
Iron-59	U	7.88	+/-7.58	16.3		pCi/L					
Lead-210	U	-86.4	+/-416	657		pCi/L					
Lead-212	U	3.43	+/-10.1	10.4		pCi/L					
Lead-214	U	8.39	+/-12.9	16.3		pCi/L					
Manganese-54	U	-0.958	+/-3.37	5.98		pCi/L					
Mercury-203	U	0.892	+/-4.14	7.52		pCi/L					
Neodymium-147	U	8.39	+/-74.6	133		pCi/L					
Neptunium-239	U	-23.8	+/-26.2	43.0		pCi/L					
Niobium-94	U	-1.48	+/-3.79	6.22		pCi/L					
Niobium-95	UI	0.00	+/-4.34	7.01		pCi/L					
Potassium-40	U	-16.6	+/-45.4	77.6		pCi/L					
Promethium-144	U	-0.497	+/-3.26	5.91		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	377742016	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.697	+/-4.28	7.46	pCi/L
Radium-228	U	10.7	+/-22.5	30.7	pCi/L
Ruthenium-106	U	0.559	+/-34.7	56.0	pCi/L
Silver-110m	U	1.36	+/-3.66	6.18	pCi/L
Sodium-22	U	2.14	+/-3.29	6.86	pCi/L
Thallium-208	U	2.53	+/-4.54	7.79	pCi/L
Thorium-230	U	1030	+/-1180	1780	pCi/L
Thorium-234	U	14.0	+/-204	257	pCi/L
Tin-113	U	-2.94	+/-5.11	8.64	pCi/L
Uranium-235	U	-17.7	+/-22.9	33.3	pCi/L
Uranium-238	U	14.0	+/-204	257	pCi/L
Yttrium-88	U	-3.57	+/-3.92	6.52	pCi/L
Zinc-65	U	-5.24	+/-7.38	12.9	pCi/L
Zirconium-95	U	0.364	+/-6.64	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.43	+/-2.99	4.98	5.00	pCi/L	KXB2	08/13/15	1646	1497329	2
Beta		5.42	+/-3.19	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	26.1	+/-130	225	300	pCi/L	MYM1	08/16/15	1057	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	377742017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:38		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-16.1	20.6		pCi/L		MJH1	08/05/15	1148 1495870	1
Americium-241	U	-4.13	+/-14.5	22.6		pCi/L					
Antimony-124	U	-2.21	+/-9.26	17.3		pCi/L					
Antimony-125	U	3.70	+/-8.53	15.8		pCi/L					
Barium-133	U	-2.0	+/-5.58	7.28		pCi/L					
Barium-140	U	-17.4	+/-38.4	65.3		pCi/L					
Beryllium-7	U	-8.91	+/-41.5	62.8		pCi/L					
Bismuth-212	U	-14.6	+/-56.0	83.1		pCi/L					
Bismuth-214	U	11.3	+/-13.2	11.7		pCi/L					
Cerium-139	U	-1.06	+/-2.82	4.70		pCi/L					
Cerium-141	U	4.13	+/-13.3	11.9		pCi/L					
Cerium-144	U	-1.22	+/-18.4	31.6		pCi/L					
Cesium-134	U	1.44	+/-3.32	6.04		pCi/L					
Cesium-136	U	8.20	+/-11.6	23.8		pCi/L					
Cesium-137	U	-3.82	+/-4.03	5.90	10.0	pCi/L					
Chromium-51	U	-34.2	+/-38.8	65.6		pCi/L					
Cobalt-56	U	3.26	+/-3.67	7.00		pCi/L					
Cobalt-57	U	-0.573	+/-2.51	4.27		pCi/L					
Cobalt-58	U	-1.82	+/-4.29	6.50		pCi/L					
Cobalt-60	U	1.38	+/-3.14	5.69		pCi/L					
Europium-152	U	-4.55	+/-8.79	15.2		pCi/L					
Europium-154	U	1.91	+/-9.64	18.3		pCi/L					
Europium-155	U	6.79	+/-9.85	17.7		pCi/L					
Iridium-192	U	0.907	+/-3.23	5.95		pCi/L					
Iron-59	U	-6.64	+/-8.02	13.2		pCi/L					
Lead-210	U	48.8	+/-320	489		pCi/L					
Lead-212		9.19	+/-8.67	8.92		pCi/L					
Lead-214	U	1.60	+/-10.1	13.0		pCi/L					
Manganese-54	U	1.26	+/-2.98	5.80		pCi/L					
Mercury-203	U	3.02	+/-3.89	7.34		pCi/L					
Neodymium-147	U	-5.93	+/-82.7	147		pCi/L					
Neptunium-239	U	-7.16	+/-24.9	42.4		pCi/L					
Niobium-94	U	2.58	+/-2.77	5.60		pCi/L					
Niobium-95	U	-1.48	+/-3.56	6.37		pCi/L					
Potassium-40	U	37.4	+/-52.3	61.9		pCi/L					
Promethium-144	U	-1.79	+/-2.87	5.04		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 28 Project: WNUC00129  
Sample ID: 377742017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.07	+/-3.97	6.46	pCi/L
Radium-228	UI	0.00	+/-16.1	20.6	pCi/L
Ruthenium-106	U	-23.8	+/-28.6	46.1	pCi/L
Silver-110m	U	-0.0758	+/-3.17	5.89	pCi/L
Sodium-22	U	0.625	+/-3.41	6.47	pCi/L
Thallium-208	U	0.848	+/-4.04	5.72	pCi/L
Thorium-230	U	421	+/-1030	1670	pCi/L
Thorium-234	U	31.4	+/-202	237	pCi/L
Tin-113	U	1.85	+/-4.39	8.10	pCi/L
Uranium-235	U	11.1	+/-35.7	31.9	pCi/L
Uranium-238	U	31.4	+/-202	237	pCi/L
Yttrium-88	U	2.05	+/-3.64	7.87	pCi/L
Zinc-65	U	4.77	+/-6.17	11.8	pCi/L
Zirconium-95	U	0.596	+/-6.99	13.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.93	+/-2.27	3.41	5.00	pCi/L	KXB2	08/14/15	1926	1497329	2
Beta	19.9	+/-2.52	3.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-123	+/-127	231	300	pCi/L	MYM1	08/16/15	1114	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377742018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.1	+/-15.7	20.7		pCi/L		MJH1	08/05/15	1151 1495870	1
Americium-241	U	0.191	+/-12.6	19.2		pCi/L					
Antimony-124	U	1.76	+/-9.51	18.8		pCi/L					
Antimony-125	U	-1.3	+/-8.84	15.2		pCi/L					
Barium-133	UI	0.00	+/-6.21	6.92		pCi/L					
Barium-140	U	46.9	+/-36.3	73.8		pCi/L					
Beryllium-7	U	3.82	+/-31.9	59.4		pCi/L					
Bismuth-212	U	27.4	+/-44.4	86.0		pCi/L					
Bismuth-214	U	8.93	+/-9.55	11.8		pCi/L					
Cerium-139	U	-0.529	+/-2.76	4.88		pCi/L					
Cerium-141	U	4.16	+/-8.57	11.0		pCi/L					
Cerium-144	U	-4.77	+/-18.8	33.3		pCi/L					
Cesium-134	U	2.30	+/-3.35	6.60		pCi/L					
Cesium-136	U	-11.1	+/-16.3	22.1		pCi/L					
Cesium-137	U	1.15	+/-3.10	5.91	10.0	pCi/L					
Chromium-51	U	-12.7	+/-42.0	72.3		pCi/L					
Cobalt-56	U	2.93	+/-3.72	7.36		pCi/L					
Cobalt-57	U	-1.3	+/-2.33	4.08		pCi/L					
Cobalt-58	U	-0.792	+/-3.26	5.85		pCi/L					
Cobalt-60	U	2.20	+/-3.62	7.35		pCi/L					
Europium-152	U	2.07	+/-9.56	17.0		pCi/L					
Europium-154	U	0.539	+/-8.56	16.7		pCi/L					
Europium-155	U	-2.63	+/-9.55	17.0		pCi/L					
Iridium-192	U	-1.23	+/-3.48	5.97		pCi/L					
Iron-59	U	-0.0584	+/-7.53	14.4		pCi/L					
Lead-210	U	-260	+/-298	434		pCi/L					
Lead-212	U	6.94	+/-8.29	9.37		pCi/L					
Lead-214	U	5.90	+/-10.4	12.1		pCi/L					
Manganese-54	U	0.821	+/-3.58	5.86		pCi/L					
Mercury-203	U	1.06	+/-4.39	6.95		pCi/L					
Neodymium-147	U	-77.7	+/-77.0	129		pCi/L					
Neptunium-239	U	-1.4	+/-25.6	45.9		pCi/L					
Niobium-94	U	2.94	+/-3.16	5.65		pCi/L					
Niobium-95	U	1.51	+/-3.87	7.33		pCi/L					
Potassium-40	U	-23.7	+/-45.9	63.5		pCi/L					
Promethium-144	U	1.97	+/-3.63	6.13		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377742018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.54	+/-3.99	7.20	pCi/L
Radium-228	U	-10.1	+/-15.7	20.7	pCi/L
Ruthenium-106	U	-19.9	+/-33.8	52.4	pCi/L
Silver-110m	U	0.577	+/-2.87	5.41	pCi/L
Sodium-22	U	-0.744	+/-3.12	5.81	pCi/L
Thallium-208	U	2.24	+/-5.07	5.71	pCi/L
Thorium-230	U	-239	+/-1080	1540	pCi/L
Thorium-234	U	28.0	+/-185	187	pCi/L
Tin-113	U	4.09	+/-4.11	7.82	pCi/L
Uranium-235	U	11.2	+/-23.0	33.7	pCi/L
Uranium-238	U	28.0	+/-185	187	pCi/L
Yttrium-88	U	-1.96	+/-3.05	5.17	pCi/L
Zinc-65	U	3.99	+/-6.40	12.1	pCi/L
Zirconium-95	U	1.26	+/-6.60	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.09	+/-3.74	4.75	5.00	pCi/L	KXB2	08/14/15	1329	1497331	2
Beta	8.79	+/-2.90	3.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-48.2	+/-124	219	300	pCi/L	MYM1	08/16/15	1130	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 377742019  
Matrix: Ground Water  
Collect Date: 13-JUL-15 09:30  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	7.36	+/-19.8	23.1		pCi/L		MJH1	08/05/15	1155	1495870	1
Americium-241	U	6.27	+/-16.6	30.1		pCi/L						
Antimony-124	U	0.423	+/-8.34	16.6		pCi/L						
Antimony-125	U	3.67	+/-8.40	15.6		pCi/L						
Barium-133	U	-0.515	+/-4.52	7.09		pCi/L						
Barium-140	U	-5.61	+/-37.5	66.2		pCi/L						
Beryllium-7	U	-10.8	+/-33.7	58.8		pCi/L						
Bismuth-212	U	27.9	+/-48.2	89.5		pCi/L						
Bismuth-214	U	13.0	+/-13.7	17.7		pCi/L						
Cerium-139	U	-1.43	+/-3.18	5.30		pCi/L						
Cerium-141	U	2.70	+/-8.28	13.0		pCi/L						
Cerium-144	U	-11.9	+/-20.8	34.9		pCi/L						
Cesium-134	U	2.94	+/-3.30	6.69		pCi/L						
Cesium-136	U	8.92	+/-13.8	25.0		pCi/L						
Cesium-137	U	-3.02	+/-3.34	5.39	10.0	pCi/L						
Chromium-51	U	-16.2	+/-43.0	75.9		pCi/L						
Cobalt-56	U	0.505	+/-3.81	7.17		pCi/L						
Cobalt-57	U	1.61	+/-2.63	4.70		pCi/L						
Cobalt-58	U	-0.74	+/-4.12	6.53		pCi/L						
Cobalt-60	U	-0.154	+/-3.90	6.68		pCi/L						
Europium-152	U	2.36	+/-10.1	16.3		pCi/L						
Europium-154	U	0.972	+/-9.46	15.8		pCi/L						
Europium-155	U	-1.34	+/-11.1	19.2		pCi/L						
Iridium-192	U	2.43	+/-3.58	6.72		pCi/L						
Iron-59	U	1.08	+/-7.90	14.9		pCi/L						
Lead-210	U	59.5	+/-697	749		pCi/L						
Lead-212	U	2.00	+/-9.19	9.70		pCi/L						
Lead-214	U	9.88	+/-10.5	11.2		pCi/L						
Manganese-54	U	-2.49	+/-3.73	5.39		pCi/L						
Mercury-203	U	-1.24	+/-4.19	7.45		pCi/L						
Neodymium-147	U	43.2	+/-86.6	161		pCi/L						
Neptunium-239	U	6.29	+/-27.5	48.3		pCi/L						
Niobium-94	U	-2.59	+/-3.19	5.17		pCi/L						
Niobium-95	U	1.05	+/-3.99	7.57		pCi/L						
Potassium-40	U	8.28	+/-52.3	59.2		pCi/L						
Promethium-144	U	-0.532	+/-3.53	6.11		pCi/L						



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 377742019

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.70	+/-4.04	7.59	pCi/L
Radium-228	U	7.36	+/-19.8	23.1	pCi/L
Ruthenium-106	U	29.2	+/-30.3	58.2	pCi/L
Silver-110m	U	1.42	+/-3.26	6.01	pCi/L
Sodium-22	U	0.295	+/-3.35	5.56	pCi/L
Thallium-208	U	3.04	+/-5.19	5.71	pCi/L
Thorium-230	U	4.47	+/-1130	2000	pCi/L
Thorium-234	U	-33.9	+/-193	297	pCi/L
Tin-113	U	-1.16	+/-4.49	7.93	pCi/L
Uranium-235	U	28.6	+/-29.2	38.0	pCi/L
Uranium-238	U	-33.9	+/-193	297	pCi/L
Yttrium-88	U	0.265	+/-3.59	7.18	pCi/L
Zinc-65	U	-12.2	+/-10.6	14.0	pCi/L
Zirconium-95	U	-4.1	+/-6.97	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.2	+/-6.74	9.13	5.00	pCi/L	KXB2	08/13/15	1328	1497331	2
Beta	21.7	+/-5.12	6.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-16.9	+/-127	223	300	pCi/L	MYM1	08/16/15	1147	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 32	Project:	WNUC00129
Sample ID:	377742020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:25		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.4	+/-24.5	27.8		pCi/L		MJH1	08/06/15	0651 1495870	1
Americium-241	U	-47	+/-33.0	54.9		pCi/L					
Antimony-124	U	-14.1	+/-11.4	17.6		pCi/L					
Antimony-125	U	4.39	+/-10.6	17.6		pCi/L					
Barium-133	U	-1.66	+/-5.21	7.95		pCi/L					
Barium-140	U	-1.37	+/-42.2	76.4		pCi/L					
Beryllium-7	U	-26.5	+/-38.5	65.4		pCi/L					
Bismuth-212	U	-7.39	+/-55.5	97.8		pCi/L					
Bismuth-214	U	6.37	+/-13.1	16.2		pCi/L					
Cerium-139	U	0.694	+/-3.52	6.20		pCi/L					
Cerium-141	U	0.0575	+/-8.71	15.2		pCi/L					
Cerium-144	U	6.36	+/-24.7	43.7		pCi/L					
Cesium-134	U	1.27	+/-4.12	7.95		pCi/L					
Cesium-136	U	5.31	+/-16.8	29.1		pCi/L					
Cesium-137	U	2.34	+/-4.22	7.92	10.0	pCi/L					
Chromium-51	U	-31.6	+/-48.1	83.6		pCi/L					
Cobalt-56	U	3.10	+/-4.60	8.28		pCi/L					
Cobalt-57	U	-0.286	+/-3.57	5.46		pCi/L					
Cobalt-58	U	2.34	+/-4.22	8.38		pCi/L					
Cobalt-60	U	-1.88	+/-4.08	7.13		pCi/L					
Europium-152	U	13.5	+/-12.4	21.5		pCi/L					
Europium-154	U	0.479	+/-10.7	20.4		pCi/L					
Europium-155	U	10.1	+/-13.0	23.7		pCi/L					
Iridium-192	U	0.417	+/-5.00	8.09		pCi/L					
Iron-59	U	0.0988	+/-8.80	16.7		pCi/L					
Lead-210	U	1950	+/-1580	2150		pCi/L					
Lead-212	U	1.83	+/-12.9	12.0		pCi/L					
Lead-214	U	13.4	+/-14.4	15.6		pCi/L					
Manganese-54	U	-0.47	+/-3.81	7.03		pCi/L					
Mercury-203	U	1.51	+/-4.91	9.06		pCi/L					
Neodymium-147	U	-80.2	+/-115	171		pCi/L					
Neptunium-239	U	22.3	+/-34.2	61.7		pCi/L					
Niobium-94	U	-0.894	+/-3.63	6.32		pCi/L					
Niobium-95	U	6.74	+/-4.82	9.78		pCi/L					
Potassium-40	U	-10.3	+/-56.2	98.2		pCi/L					
Promethium-144	U	-1.42	+/-3.90	6.71		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 32 Project: WNUC00129  
Sample ID: 377742020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.90	+/-4.79	9.04	pCi/L
Radium-228	U	13.4	+/-24.5	27.8	pCi/L
Ruthenium-106	U	23.6	+/-37.0	63.1	pCi/L
Silver-110m	U	-2.27	+/-4.80	6.91	pCi/L
Sodium-22	U	0.0409	+/-3.78	7.18	pCi/L
Thallium-208	U	-3.64	+/-5.10	7.67	pCi/L
Thorium-230	U	-777	+/-1790	3120	pCi/L
Thorium-234	U	-187	+/-307	477	pCi/L
Tin-113	U	-0.166	+/-4.99	9.02	pCi/L
Uranium-235	U	-28.2	+/-27.9	43.0	pCi/L
Uranium-238	U	-187	+/-307	477	pCi/L
Yttrium-88	U	0.762	+/-5.32	10.5	pCi/L
Zinc-65	U	4.59	+/-9.14	17.9	pCi/L
Zirconium-95	U	-4.34	+/-7.75	13.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.63	+/-2.74	4.92	5.00	pCi/L	KXB2	08/14/15	1334	1497331	2
Beta		191	+/-10.3	4.23	5.00	pCi/L					
Alpha		8.08	+/-4.16	4.82	5.00	pCi/L	KXB2	08/18/15	0708	1497331	3
Beta		201	+/-8.33	2.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	390	+/-144	224	300	pCi/L	MYM1	08/16/15	1204	1497817	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 377742020

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 33  
Sample ID: 377742021  
Matrix: Ground Water  
Collect Date: 10-JUL-15 08:46  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.09	+/-17.2	23.8		pCi/L		MJH1	08/03/15	0902 1496184	1
Americium-241	U	5.39	+/-16.2	26.4		pCi/L					
Antimony-124	U	3.50	+/-9.51	19.5		pCi/L					
Antimony-125	U	-1.12	+/-9.10	16.0		pCi/L					
Barium-133	U	3.76	+/-4.16	7.20		pCi/L					
Barium-140	U	40.0	+/-41.2	79.5		pCi/L					
Beryllium-7	U	4.83	+/-38.6	68.5		pCi/L					
Bismuth-212	U	63.5	+/-98.0	100		pCi/L					
Bismuth-214	U	10.8	+/-10.4	12.4		pCi/L					
Cerium-139	U	-1.38	+/-3.72	5.46		pCi/L					
Cerium-141	U	-1.39	+/-7.46	12.6		pCi/L					
Cerium-144	U	-3.28	+/-20.6	35.1		pCi/L					
Cesium-134	U	0.355	+/-4.48	6.96		pCi/L					
Cesium-136	U	-7.05	+/-15.8	25.2		pCi/L					
Cesium-137	U	4.99	+/-5.85	5.90	10.0	pCi/L					
Chromium-51	U	-69.6	+/-48.0	77.2		pCi/L					
Cobalt-56	U	1.47	+/-4.24	8.01		pCi/L					
Cobalt-57	U	-2.06	+/-2.78	4.60		pCi/L					
Cobalt-58	U	-0.942	+/-3.65	6.56		pCi/L					
Cobalt-60	U	-3.38	+/-3.42	5.56		pCi/L					
Europium-152	U	3.41	+/-10.1	18.4		pCi/L					
Europium-154	U	5.81	+/-8.39	22.9		pCi/L					
Europium-155	U	4.64	+/-10.2	18.2		pCi/L					
Iridium-192	U	3.25	+/-3.66	6.94		pCi/L					
Iron-59	U	-4.85	+/-8.38	14.9		pCi/L					
Lead-210	U	-219	+/-396	607		pCi/L					
Lead-212	U	7.08	+/-10.1	12.2		pCi/L					
Lead-214	U	6.07	+/-15.4	14.9		pCi/L					
Manganese-54	U	-1.05	+/-3.39	6.00		pCi/L					
Mercury-203	U	0.853	+/-4.46	8.07		pCi/L					
Neodymium-147	U	-6.24	+/-92.9	163		pCi/L					
Neptunium-239	U	-9.12	+/-27.5	46.6		pCi/L					
Niobium-94	U	-3.37	+/-3.76	5.87		pCi/L					
Niobium-95	U	4.00	+/-4.09	8.21		pCi/L					
Potassium-40		73.6	+/-43.5	43.6		pCi/L					
Promethium-144	U	-3.35	+/-3.20	5.28		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 33 Project: WNUC00129  
Sample ID: 377742021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.98	+/-4.55	7.73	pCi/L
Radium-228	U	-9.09	+/-17.2	23.8	pCi/L
Ruthenium-106	U	17.2	+/-32.7	62.7	pCi/L
Silver-110m	U	-1.41	+/-3.50	5.33	pCi/L
Sodium-22	U	2.06	+/-2.98	6.61	pCi/L
Thallium-208	U	-2.03	+/-4.71	7.55	pCi/L
Thorium-230	UI	0.00	+/-1610	1790	pCi/L
Thorium-234	U	88.9	+/-186	220	pCi/L
Tin-113	U	5.66	+/-6.62	8.72	pCi/L
Uranium-235	U	-7.0	+/-23.4	35.1	pCi/L
Uranium-238	U	88.9	+/-186	220	pCi/L
Yttrium-88	U	-0.696	+/-4.45	8.55	pCi/L
Zinc-65	U	-0.582	+/-6.84	11.7	pCi/L
Zirconium-95	U	0.865	+/-7.08	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.99	+/-2.58	4.33	5.00	pCi/L	KXB2	08/14/15	1329	1497331	2
Beta		5.26	+/-2.91	4.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-9.39	+/-126	221	300	pCi/L	MYM1	08/16/15	1220	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	377742022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 08:45		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-7.27	+/-17.6	26.3		pCi/L		MJH1	08/03/15	0902	1496184	1
Americium-241	U	14.6	+/-23.4	39.7		pCi/L						
Antimony-124	U	-0.0417	+/-8.34	16.5		pCi/L						
Antimony-125	U	4.48	+/-8.66	16.3		pCi/L						
Barium-133	U	-2.84	+/-4.17	6.14		pCi/L						
Barium-140	U	5.05	+/-34.4	62.6		pCi/L						
Beryllium-7	U	5.17	+/-31.3	57.3		pCi/L						
Bismuth-212	U	-6.75	+/-45.4	83.6		pCi/L						
Bismuth-214	U	4.16	+/-12.9	12.4		pCi/L						
Cerium-139	U	-1.48	+/-2.87	4.80		pCi/L						
Cerium-141	U	0.0564	+/-8.19	10.6		pCi/L						
Cerium-144	U	-7.25	+/-19.8	33.7		pCi/L						
Cesium-134	U	1.53	+/-3.16	6.31		pCi/L						
Cesium-136	U	16.7	+/-11.7	24.0		pCi/L						
Cesium-137	U	0.490	+/-3.36	6.38	10.0	pCi/L						
Chromium-51	U	8.66	+/-37.2	69.1		pCi/L						
Cobalt-56	U	-0.111	+/-4.10	7.56		pCi/L						
Cobalt-57	U	2.25	+/-2.49	4.60		pCi/L						
Cobalt-58	U	1.97	+/-3.78	7.43		pCi/L						
Cobalt-60	U	0.428	+/-2.97	5.36		pCi/L						
Europium-152	U	-3.22	+/-9.00	15.9		pCi/L						
Europium-154	U	5.01	+/-9.25	18.8		pCi/L						
Europium-155	U	-2.0	+/-10.1	17.7		pCi/L						
Iridium-192	U	-3.27	+/-3.23	5.43		pCi/L						
Iron-59	U	2.34	+/-7.40	14.5		pCi/L						
Lead-210	U	315	+/-696	1300		pCi/L						
Lead-212	U	-3.52	+/-6.98	11.2		pCi/L						
Lead-214	U	4.50	+/-10.6	11.2		pCi/L						
Manganese-54	U	-3.33	+/-2.86	4.57		pCi/L						
Mercury-203	U	-6.27	+/-3.87	6.29		pCi/L						
Neodymium-147	U	-23	+/-76.4	133		pCi/L						
Neptunium-239	U	6.70	+/-25.6	45.7		pCi/L						
Niobium-94	U	-0.16	+/-3.07	5.69		pCi/L						
Niobium-95	U	-2.27	+/-5.49	7.73		pCi/L						
Potassium-40	U	-12.9	+/-53.2	95.5		pCi/L						
Promethium-144	U	0.436	+/-3.07	5.82		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 38 Project: WNUC00129  
Sample ID: 377742022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.57	+/-3.69	6.41	pCi/L
Radium-228	U	-7.27	+/-17.6	26.3	pCi/L
Ruthenium-106	U	-16.3	+/-29.2	48.8	pCi/L
Silver-110m	U	0.699	+/-3.16	5.92	pCi/L
Sodium-22	U	1.83	+/-3.28	6.68	pCi/L
Thallium-208	U	1.84	+/-5.09	5.49	pCi/L
Thorium-230	U	1470	+/-1840	2310	pCi/L
Thorium-234	U	62.0	+/-279	300	pCi/L
Tin-113	U	0.664	+/-3.87	7.16	pCi/L
Uranium-235	U	0.159	+/-23.0	32.0	pCi/L
Uranium-238	U	62.0	+/-279	300	pCi/L
Yttrium-88	U	-2.81	+/-3.45	5.60	pCi/L
Zinc-65	U	-1.21	+/-6.96	12.7	pCi/L
Zirconium-95	U	2.72	+/-6.21	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.37	+/-2.33	4.21	5.00	pCi/L	KXB2	08/14/15	1331	1497331	2
Beta	U	2.37	+/-2.58	4.28	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-38.9	+/-131	232	300	pCi/L	MYM1	08/16/15	1237	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	377742023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.949	+/-19.2	31.9		pCi/L		MJH1	08/03/15	0903 1496184	1
Americium-241	U	-42.1	+/-27.6	45.3		pCi/L					
Antimony-124	U	-2.31	+/-11.8	22.0		pCi/L					
Antimony-125	U	1.32	+/-9.56	17.2		pCi/L					
Barium-133	U	6.63	+/-4.97	8.96		pCi/L					
Barium-140	U	-16.3	+/-38.7	58.5		pCi/L					
Beryllium-7	U	19.6	+/-35.6	69.2		pCi/L					
Bismuth-212	U	-15.8	+/-48.9	86.0		pCi/L					
Bismuth-214	UI	0.00	+/-11.2	17.1		pCi/L					
Cerium-139	U	-1.85	+/-3.34	5.50		pCi/L					
Cerium-141	U	0.844	+/-8.28	12.9		pCi/L					
Cerium-144	U	8.65	+/-21.7	38.7		pCi/L					
Cesium-134	U	-0.975	+/-4.01	7.09		pCi/L					
Cesium-136	U	17.0	+/-13.1	28.7		pCi/L					
Cesium-137	U	2.91	+/-4.23	8.20	10.0	pCi/L					
Chromium-51	U	12.3	+/-47.3	85.8		pCi/L					
Cobalt-56	U	0.802	+/-4.47	8.58		pCi/L					
Cobalt-57	U	0.954	+/-2.63	4.74		pCi/L					
Cobalt-58	U	0.108	+/-4.32	8.20		pCi/L					
Cobalt-60	U	2.83	+/-3.92	8.26		pCi/L					
Europium-152	U	4.35	+/-10.2	18.9		pCi/L					
Europium-154	U	0.502	+/-11.6	22.7		pCi/L					
Europium-155	U	6.39	+/-12.5	22.7		pCi/L					
Iridium-192	U	-0.37	+/-3.87	6.88		pCi/L					
Iron-59	U	5.08	+/-9.73	19.5		pCi/L					
Lead-210	U	-52.4	+/-1200	2210		pCi/L					
Lead-212	U	0.324	+/-10.7	12.6		pCi/L					
Lead-214	U	4.46	+/-12.4	16.8		pCi/L					
Manganese-54	U	-2.51	+/-3.69	6.44		pCi/L					
Mercury-203	U	0.671	+/-4.73	8.54		pCi/L					
Neodymium-147	U	-17.6	+/-80.8	146		pCi/L					
Neptunium-239	U	7.84	+/-30.1	53.5		pCi/L					
Niobium-94	U	-0.434	+/-3.33	6.00		pCi/L					
Niobium-95	U	-3.98	+/-4.31	6.91		pCi/L					
Potassium-40	U	-67.8	+/-58.8	86.5		pCi/L					
Promethium-144	U	-3.03	+/-6.01	7.39		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 39 Project: WNUC00129  
Sample ID: 377742023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.42	+/-4.65	8.08	pCi/L
Radium-228	U	-0.949	+/-19.2	31.9	pCi/L
Ruthenium-106	U	22.6	+/-37.6	65.2	pCi/L
Silver-110m	U	3.12	+/-4.08	7.95	pCi/L
Sodium-22	U	0.104	+/-4.08	7.99	pCi/L
Thallium-208	U	2.02	+/-5.24	7.28	pCi/L
Thorium-230	U	1580	+/-2430	2950	pCi/L
Thorium-234	U	-217	+/-283	415	pCi/L
Tin-113	U	-2.79	+/-4.77	7.99	pCi/L
Uranium-235	U	-41.6	+/-25.7	35.6	pCi/L
Uranium-238	U	-217	+/-283	415	pCi/L
Yttrium-88	U	4.10	+/-5.12	11.3	pCi/L
Zinc-65	U	-4.27	+/-9.01	15.7	pCi/L
Zirconium-95	U	-2.88	+/-7.78	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.23	+/-3.15	4.88	5.00	pCi/L	KXB2	08/14/15	1330	1497331	2
Beta		13.3	+/-3.18	3.47	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-35	+/-129	228	300	pCi/L	MYM1	08/16/15	1254	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377742024  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:53  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-4.81	+/-17.4	24.9		pCi/L		MJH1	08/03/15	0911	1496184	1
Americium-241	U	-3.63	+/-18.6	29.2		pCi/L						
Antimony-124	U	1.26	+/-6.98	14.6		pCi/L						
Antimony-125	U	0.447	+/-8.90	16.0		pCi/L						
Barium-133	U	-2.44	+/-3.86	6.67		pCi/L						
Barium-140	U	-14.3	+/-40.3	69.7		pCi/L						
Beryllium-7	U	7.84	+/-34.2	62.3		pCi/L						
Bismuth-212	U	-15.8	+/-47.3	80.6		pCi/L						
Bismuth-214	U	-9.73	+/-10.2	13.7		pCi/L						
Cerium-139	U	0.875	+/-3.34	5.20		pCi/L						
Cerium-141	UI	0.00	+/-13.8	12.9		pCi/L						
Cerium-144	U	0.378	+/-21.2	36.6		pCi/L						
Cesium-134	U	4.69	+/-3.53	7.32		pCi/L						
Cesium-136	U	-0.429	+/-12.6	23.6		pCi/L						
Cesium-137	U	0.761	+/-3.11	5.70	10.0	pCi/L						
Chromium-51	U	-2.34	+/-43.2	77.9		pCi/L						
Cobalt-56	U	1.53	+/-3.53	6.88		pCi/L						
Cobalt-57	U	-0.262	+/-2.75	4.74		pCi/L						
Cobalt-58	U	1.28	+/-3.49	6.77		pCi/L						
Cobalt-60	U	0.477	+/-3.77	6.61		pCi/L						
Europium-152	U	6.50	+/-9.47	17.7		pCi/L						
Europium-154	U	3.89	+/-8.96	17.7		pCi/L						
Europium-155	U	5.50	+/-10.9	19.5		pCi/L						
Iridium-192	U	-1.72	+/-3.65	6.40		pCi/L						
Iron-59	U	-4.11	+/-8.18	14.3		pCi/L						
Lead-210	U	315	+/-814	704		pCi/L						
Lead-212	U	6.95	+/-10.7	11.6		pCi/L						
Lead-214	U	2.87	+/-8.72	14.4		pCi/L						
Manganese-54	U	-1.44	+/-4.24	6.64		pCi/L						
Mercury-203	U	4.35	+/-5.19	6.86		pCi/L						
Neodymium-147	U	11.7	+/-93.2	168		pCi/L						
Neptunium-239	U	-14.6	+/-26.0	43.8		pCi/L						
Niobium-94	U	-0.296	+/-3.05	5.33		pCi/L						
Niobium-95	U	0.240	+/-4.06	7.56		pCi/L						
Potassium-40	U	40.8	+/-49.8	54.2		pCi/L						
Promethium-144	U	2.02	+/-3.12	5.86		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377742024

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.374	+/-3.93	7.00	pCi/L
Radium-228	U	-4.81	+/-17.4	24.9	pCi/L
Ruthenium-106	U	-25.6	+/-30.5	49.9	pCi/L
Silver-110m	U	-5.31	+/-3.81	4.69	pCi/L
Sodium-22	U	1.28	+/-3.16	6.23	pCi/L
Thallium-208	U	-1.42	+/-4.01	6.30	pCi/L
Thorium-230	U	716	+/-1250	2050	pCi/L
Thorium-234	U	113	+/-253	249	pCi/L
Tin-113	U	2.64	+/-4.60	8.56	pCi/L
Uranium-235	UI	0.00	+/-36.5	33.8	pCi/L
Uranium-238	U	113	+/-253	249	pCi/L
Yttrium-88	U	2.15	+/-5.13	10.2	pCi/L
Zinc-65	U	-0.10	+/-7.52	12.1	pCi/L
Zirconium-95	U	2.70	+/-8.10	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.77	+/-4.31	5.27	5.00	pCi/L	KXB2	08/17/15	1343	1497331	2
Beta	22.2	+/-4.21	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	13.7	+/-128	223	300	pCi/L	MYM1	08/16/15	1310	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 43  
Sample ID: 377742025  
Matrix: Ground Water  
Collect Date: 15-JUL-15 10:31  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.208	+/-17.7	19.0		pCi/L		MJH1	08/03/15	0911 1496184	1
Americium-241	U	-3.28	+/-12.7	22.3		pCi/L					
Antimony-124	U	1.53	+/-8.90	17.7		pCi/L					
Antimony-125	U	3.94	+/-7.60	14.3		pCi/L					
Barium-133	U	-3.83	+/-5.51	6.88		pCi/L					
Barium-140	U	11.1	+/-29.0	53.7		pCi/L					
Beryllium-7	U	-9.82	+/-29.6	51.4		pCi/L					
Bismuth-212	U	-37.4	+/-56.4	80.3		pCi/L					
Bismuth-214		15.1	+/-12.3	11.4		pCi/L					
Cerium-139	U	0.499	+/-3.09	4.76		pCi/L					
Cerium-141	U	0.0773	+/-6.59	11.3		pCi/L					
Cerium-144	U	5.11	+/-18.5	32.4		pCi/L					
Cesium-134	U	-2.54	+/-3.63	5.23		pCi/L					
Cesium-136	U	11.3	+/-16.1	21.7		pCi/L					
Cesium-137	U	-3.24	+/-4.13	6.21	10.0	pCi/L					
Chromium-51	U	-27.1	+/-36.9	63.2		pCi/L					
Cobalt-56	U	1.08	+/-3.46	6.65		pCi/L					
Cobalt-57	U	0.262	+/-2.36	4.11		pCi/L					
Cobalt-58	U	-1.3	+/-3.62	5.57		pCi/L					
Cobalt-60	U	-0.149	+/-3.33	6.13		pCi/L					
Europium-152	U	3.89	+/-9.02	16.7		pCi/L					
Europium-154	U	-2.28	+/-10.1	17.5		pCi/L					
Europium-155	U	-1.29	+/-9.30	16.1		pCi/L					
Iridium-192	U	1.65	+/-3.38	6.26		pCi/L					
Iron-59	U	-2.95	+/-7.20	12.7		pCi/L					
Lead-210	U	-128	+/-328	486		pCi/L					
Lead-212	U	7.09	+/-8.77	10.8		pCi/L					
Lead-214	U	11.0	+/-9.78	13.6		pCi/L					
Manganese-54	U	-0.394	+/-2.97	5.46		pCi/L					
Mercury-203	U	1.08	+/-3.73	6.84		pCi/L					
Neodymium-147	U	-29.6	+/-65.6	102		pCi/L					
Neptunium-239	U	21.8	+/-25.5	42.2		pCi/L					
Niobium-94	U	-0.894	+/-3.12	5.64		pCi/L					
Niobium-95	U	-0.0782	+/-3.35	6.25		pCi/L					
Potassium-40	U	-45.2	+/-47.6	71.0		pCi/L					
Promethium-144	U	0.778	+/-3.17	5.99		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 43 Project: WNUC00129  
Sample ID: 377742025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.732	+/-3.78	6.65	pCi/L
Radium-228	U	0.208	+/-17.7	19.0	pCi/L
Ruthenium-106	U	27.5	+/-45.2	51.8	pCi/L
Silver-110m	U	-2.64	+/-3.13	5.40	pCi/L
Sodium-22	U	-0.754	+/-3.58	6.21	pCi/L
Thallium-208	UI	0.00	+/-7.40	4.85	pCi/L
Thorium-230	U	278	+/-930	1660	pCi/L
Thorium-234	U	-114	+/-149	219	pCi/L
Tin-113	U	3.15	+/-4.20	7.93	pCi/L
Uranium-235	U	1.89	+/-22.0	33.6	pCi/L
Uranium-238	U	-114	+/-149	219	pCi/L
Yttrium-88	U	1.11	+/-3.52	7.35	pCi/L
Zinc-65	U	7.09	+/-6.76	13.1	pCi/L
Zirconium-95	U	0.392	+/-6.52	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.462	+/-1.96	4.15	5.00	pCi/L	KXB2	08/13/15	1332	1497331	2
Beta		7.50	+/-3.35	4.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-46.1	+/-123	219	300	pCi/L	MYM1	08/16/15	1327	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	377742026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-24.6	30.5		pCi/L		MJH1	08/03/15	0912	1496184	1
Americium-241	U	3.69	+/-29.9	48.0		pCi/L						
Antimony-124	U	-7.83	+/-10.5	17.6		pCi/L						
Antimony-125	U	3.69	+/-9.97	18.3		pCi/L						
Barium-133	U	0.589	+/-4.99	7.96		pCi/L						
Barium-140	U	-25.2	+/-49.5	71.0		pCi/L						
Beryllium-7	U	34.3	+/-34.3	67.8		pCi/L						
Bismuth-212	U	33.7	+/-48.0	96.4		pCi/L						
Bismuth-214	U	3.72	+/-12.8	16.9		pCi/L						
Cerium-139	U	0.538	+/-3.44	5.91		pCi/L						
Cerium-141	U	-3.23	+/-9.40	13.9		pCi/L						
Cerium-144	U	13.2	+/-25.5	40.6		pCi/L						
Cesium-134	U	-0.902	+/-3.68	6.71		pCi/L						
Cesium-136	U	7.91	+/-15.3	30.8		pCi/L						
Cesium-137	U	0.733	+/-3.68	7.01	10.0	pCi/L						
Chromium-51	U	10.8	+/-47.1	86.4		pCi/L						
Cobalt-56	U	1.40	+/-4.17	8.09		pCi/L						
Cobalt-57	U	-0.217	+/-2.93	4.80		pCi/L						
Cobalt-58	U	0.215	+/-5.24	8.47		pCi/L						
Cobalt-60	U	0.306	+/-3.61	7.17		pCi/L						
Europium-152	U	6.84	+/-9.73	18.5		pCi/L						
Europium-154	U	-0.0871	+/-8.95	17.8		pCi/L						
Europium-155	U	-5.93	+/-12.0	20.1		pCi/L						
Iridium-192	U	1.48	+/-3.71	6.91		pCi/L						
Iron-59	U	0.518	+/-9.34	16.7		pCi/L						
Lead-210	U	-395	+/-1290	1980		pCi/L						
Lead-212	U	6.13	+/-10.6	13.1		pCi/L						
Lead-214	U	8.67	+/-13.0	16.7		pCi/L						
Manganese-54	U	-0.046	+/-3.33	6.24		pCi/L						
Mercury-203	U	-0.105	+/-4.75	8.53		pCi/L						
Neodymium-147	U	76.6	+/-97.4	189		pCi/L						
Neptunium-239	U	41.5	+/-38.1	52.4		pCi/L						
Niobium-94	U	1.52	+/-3.64	6.68		pCi/L						
Niobium-95	U	1.13	+/-4.24	8.14		pCi/L						
Potassium-40	UI	0.00	+/-37.1	9.43		pCi/L						
Promethium-144	U	2.80	+/-3.73	7.36		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 44 Project: WNUC00129  
Sample ID: 377742026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.844	+/-4.39	7.99	pCi/L
Radium-228	UI	0.00	+/-24.6	30.5	pCi/L
Ruthenium-106	U	20.4	+/-32.2	63.8	pCi/L
Silver-110m	U	-1.22	+/-3.51	6.35	pCi/L
Sodium-22	U	-0.0981	+/-3.16	6.27	pCi/L
Thallium-208	U	-1.61	+/-4.85	7.39	pCi/L
Thorium-230	U	1690	+/-1730	2930	pCi/L
Thorium-234	U	134	+/-317	434	pCi/L
Tin-113	U	2.09	+/-5.04	9.31	pCi/L
Uranium-235	U	-9.02	+/-27.8	38.3	pCi/L
Uranium-238	U	134	+/-317	434	pCi/L
Yttrium-88	U	3.62	+/-5.15	11.1	pCi/L
Zinc-65	U	-3.67	+/-7.31	12.6	pCi/L
Zirconium-95	U	3.88	+/-7.91	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.40	+/-2.50	4.41	5.00	pCi/L	KXB2	08/17/15	1343	1497331	2
Beta	U	-1.71	+/-2.70	5.34	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-97.2	+/-118	214	300	pCi/L	MYM1	08/16/15	1344	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377742027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:00		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	23.9	+/-25.3	28.8		pCi/L		MJH1	08/03/15	0912	1496184	1
Americium-241	U	4.66	+/-27.5	47.7		pCi/L						
Antimony-124	U	-4.94	+/-15.4	24.2		pCi/L						
Antimony-125	U	2.47	+/-12.4	19.5		pCi/L						
Barium-133	U	-2.97	+/-5.21	8.79		pCi/L						
Barium-140	U	-20.8	+/-34.0	60.0		pCi/L						
Beryllium-7	U	30.9	+/-37.9	72.2		pCi/L						
Bismuth-212	U	20.1	+/-52.3	101		pCi/L						
Bismuth-214	U	10.7	+/-14.8	13.1		pCi/L						
Cerium-139	U	-2.38	+/-4.09	6.18		pCi/L						
Cerium-141	U	11.8	+/-17.4	13.1		pCi/L						
Cerium-144	U	-6.27	+/-24.3	43.1		pCi/L						
Cesium-134	U	3.09	+/-5.21	9.07		pCi/L						
Cesium-136	U	-5.84	+/-14.6	25.6		pCi/L						
Cesium-137	U	-5.84	+/-4.03	6.35	10.0	pCi/L						
Chromium-51	U	-11.5	+/-55.4	90.6		pCi/L						
Cobalt-56	U	-0.905	+/-4.93	8.88		pCi/L						
Cobalt-57	U	-1.0	+/-3.29	5.83		pCi/L						
Cobalt-58	U	-2.65	+/-3.74	6.16		pCi/L						
Cobalt-60	U	0.666	+/-4.25	8.44		pCi/L						
Europium-152	U	1.13	+/-11.8	21.0		pCi/L						
Europium-154	U	5.17	+/-10.6	22.3		pCi/L						
Europium-155	U	-3.81	+/-14.3	23.7		pCi/L						
Iridium-192	U	2.68	+/-4.50	8.27		pCi/L						
Iron-59	U	1.41	+/-9.39	17.8		pCi/L						
Lead-210	U	328	+/-961	1700		pCi/L						
Lead-212	U	1.78	+/-9.82	14.1		pCi/L						
Lead-214	U	-4.67	+/-11.3	16.6		pCi/L						
Manganese-54	U	1.19	+/-4.61	8.64		pCi/L						
Mercury-203	U	0.737	+/-4.77	8.54		pCi/L						
Neodymium-147	U	41.2	+/-83.2	160		pCi/L						
Neptunium-239	U	-12.8	+/-33.4	59.3		pCi/L						
Niobium-94	U	-0.433	+/-3.53	6.47		pCi/L						
Niobium-95	U	5.19	+/-4.80	9.72		pCi/L						
Potassium-40	U	2.06	+/-64.3	69.2		pCi/L						
Promethium-144	U	0.140	+/-3.47	6.50		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 47  
Sample ID: 377742027  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.307	+/-4.99	8.85	pCi/L
Radium-228	U	23.9	+/-25.3	28.8	pCi/L
Ruthenium-106	U	-46.3	+/-40.6	54.7	pCi/L
Silver-110m	U	3.55	+/-3.63	7.41	pCi/L
Sodium-22	U	0.784	+/-3.88	7.84	pCi/L
Thallium-208	U	0.264	+/-6.56	7.46	pCi/L
Thorium-230	U	-1140	+/-1640	2690	pCi/L
Thorium-234	U	-97.8	+/-286	444	pCi/L
Tin-113	U	-0.66	+/-5.35	9.37	pCi/L
Uranium-235	U	35.3	+/-52.1	39.2	pCi/L
Uranium-238	U	-97.8	+/-286	444	pCi/L
Yttrium-88	U	-3.58	+/-5.15	8.76	pCi/L
Zinc-65	U	-1.05	+/-9.70	15.2	pCi/L
Zirconium-95	U	1.43	+/-8.23	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.46	+/-3.12	5.25	5.00	pCi/L	KXB2	08/13/15	1330	1497331	2
Beta		80.8	+/-7.72	5.01	5.00	pCi/L					
Alpha	U	1.03	+/-2.54	4.61	5.00	pCi/L	KXB2	08/14/15	1331	1497331	3
Beta		78.0	+/-6.84	3.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	28.5	+/-126	218	300	pCi/L	MYM1	08/16/15	1400	1497817	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377742027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	377742028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.31	+/-16.3	23.0		pCi/L		MJH1	08/03/15	0912 1496184	1
Americium-241	U	6.24	+/-12.3	19.5		pCi/L					
Antimony-124	U	2.22	+/-10.3	20.3		pCi/L					
Antimony-125	U	-4.21	+/-7.93	13.3		pCi/L					
Barium-133	U	5.48	+/-7.42	8.08		pCi/L					
Barium-140	U	5.07	+/-42.3	69.0		pCi/L					
Beryllium-7	U	16.6	+/-29.7	57.6		pCi/L					
Bismuth-212	U	58.6	+/-41.7	80.0		pCi/L					
Bismuth-214	U	8.81	+/-11.3	12.6		pCi/L					
Cerium-139	U	1.92	+/-2.90	5.34		pCi/L					
Cerium-141	U	8.04	+/-7.33	12.5		pCi/L					
Cerium-144	UI	0.00	+/-18.2	29.7		pCi/L					
Cesium-134	U	-1.19	+/-3.14	5.53		pCi/L					
Cesium-136	U	-0.799	+/-14.2	25.7		pCi/L					
Cesium-137	U	0.714	+/-3.27	6.12	10.0	pCi/L					
Chromium-51	U	-38.3	+/-44.6	73.5		pCi/L					
Cobalt-56	U	2.42	+/-3.96	7.64		pCi/L					
Cobalt-57	U	-0.511	+/-2.20	3.93		pCi/L					
Cobalt-58	U	-1.85	+/-3.77	6.53		pCi/L					
Cobalt-60	U	-2.39	+/-4.05	7.07		pCi/L					
Europium-152	U	4.80	+/-8.96	16.4		pCi/L					
Europium-154	U	-1.56	+/-9.13	17.1		pCi/L					
Europium-155	U	-5.41	+/-10.0	15.4		pCi/L					
Iridium-192	U	-1.6	+/-3.56	6.07		pCi/L					
Iron-59	U	6.57	+/-8.82	17.9		pCi/L					
Lead-210	U	-160	+/-296	441		pCi/L					
Lead-212	U	1.15	+/-8.43	10.8		pCi/L					
Lead-214	U	2.33	+/-8.46	12.3		pCi/L					
Manganese-54	U	2.61	+/-3.07	6.13		pCi/L					
Mercury-203	U	2.76	+/-4.15	7.62		pCi/L					
Neodymium-147	U	-45	+/-95.3	158		pCi/L					
Neptunium-239	U	1.48	+/-23.9	43.3		pCi/L					
Niobium-94	U	-1.18	+/-3.28	4.94		pCi/L					
Niobium-95	U	0.500	+/-3.89	7.19		pCi/L					
Potassium-40		64.7	+/-49.7	58.0		pCi/L					
Promethium-144	U	5.62	+/-3.98	7.04		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 48 Project: WNUC00129  
Sample ID: 377742028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.300	+/-3.85	6.79	pCi/L
Radium-228	U	-5.31	+/-16.3	23.0	pCi/L
Ruthenium-106	U	8.57	+/-32.4	53.5	pCi/L
Silver-110m	U	-3.56	+/-3.23	5.28	pCi/L
Sodium-22	U	0.0844	+/-3.10	5.99	pCi/L
Thallium-208	U	-0.265	+/-4.21	6.75	pCi/L
Thorium-230	U	-434	+/-1090	1540	pCi/L
Thorium-234	U	142	+/-206	167	pCi/L
Tin-113	U	-1.93	+/-4.24	7.17	pCi/L
Uranium-235	U	0.463	+/-19.8	33.6	pCi/L
Uranium-238	U	142	+/-206	167	pCi/L
Yttrium-88	U	-1.39	+/-4.32	7.78	pCi/L
Zinc-65	U	-5.01	+/-7.35	12.8	pCi/L
Zirconium-95	U	-1.89	+/-6.95	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.91	+/-2.44	4.12	5.00	pCi/L	KXB2	08/14/15	1331	1497331	2
Beta		6.43	+/-2.91	3.98	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-5.77	+/-126	220	300	pCi/L	MYM1	08/16/15	1417	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## QC Summary

Report Date: August 18, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 377742

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1495870										
QC1203362670 377742001 DUP											
Actinium-228	U	-5.67	U	12.8	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-15.4		+/-16.7							
Americium-241	U	18.2	U	-20.2	pCi/L	N/A		N/A			
	Uncertainty	+/-21.9		+/-20.1							
Antimony-124	U	-1.12	U	1.68	pCi/L	N/A		N/A			
	Uncertainty	+/-9.35		+/-12.0							
Antimony-125	U	-7.68	U	-0.776	pCi/L	N/A		N/A			
	Uncertainty	+/-8.24		+/-11.2							
Barium-133	U	0.346	U	-2.89	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-5.54							
Barium-140	U	-9.65	U	43.3	pCi/L	N/A		N/A			
	Uncertainty	+/-42.1		+/-63.4							
Beryllium-7	U	-21.9	U	16.1	pCi/L	N/A		N/A			
	Uncertainty	+/-35.8		+/-47.1							
Bismuth-212	U	46.1	U	-50.9	pCi/L	N/A		N/A			
	Uncertainty	+/-45.0		+/-67.4							
Bismuth-214	UI	0.00	U	6.46	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-9.94							
Cerium-139	U	-0.638	U	-3.62	pCi/L	N/A		N/A			
	Uncertainty	+/-3.02		+/-4.31							
Cerium-141	U	-1.22	U	3.41	pCi/L	N/A		N/A			
	Uncertainty	+/-7.62		+/-9.90							
Cerium-144	U	3.42	U	-5.53	pCi/L	N/A		N/A			
	Uncertainty	+/-18.9		+/-28.2							
Cesium-134	U	3.90	U	1.07	pCi/L	N/A		N/A			
	Uncertainty	+/-5.04		+/-4.72							
Cesium-136	U	8.40	U	7.13	pCi/L	N/A		N/A			
	Uncertainty	+/-15.4		+/-21.0							
Cesium-137	UI	0.00	U	0.0218	pCi/L	N/A		N/A			
	Uncertainty	+/-4.52		+/-4.35							
Chromium-51	U	-14.6	U	-34.8	pCi/L	N/A		N/A			
	Uncertainty	+/-47.4		+/-63.0							
Cobalt-56	U	-0.251	U	-0.872	pCi/L	N/A		N/A			
	Uncertainty	+/-3.78		+/-5.14							
Cobalt-57	U	1.17	U	1.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.55		+/-3.80							
Cobalt-58	U	-2.78	U	4.92	pCi/L	N/A		N/A			
	Uncertainty	+/-3.85		+/-5.34							
Cobalt-60	U	-0.0457	U	-2.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.10		+/-3.88							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Europium-152	U	-3.76	U	14.5	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-9.42		+/-14.2							
Europium-154	U	8.54	U	10.8	pCi/L	N/A		N/A			
	Uncertainty	+/-9.53		+/-10.5							
Europium-155	U	-1.86	U	9.62	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-12.8							
Iridium-192	U	1.11	U	0.273	pCi/L	N/A		N/A			
	Uncertainty	+/-3.85		+/-4.85							
Iron-59	U	-0.275	U	-3.14	pCi/L	N/A		N/A			
	Uncertainty	+/-9.29		+/-10.7							
Lead-210	U	609	U	453	pCi/L	N/A		N/A			
	Uncertainty	+/-724		+/-739							
Lead-212	U	5.81	U	-0.576	pCi/L	N/A		N/A			
	Uncertainty	+/-8.84		+/-8.92							
Lead-214	U	9.90	U	12.5	pCi/L	N/A		N/A			
	Uncertainty	+/-12.9		+/-10.9							
Manganese-54	U	0.354	U	1.76	pCi/L	N/A		N/A			
	Uncertainty	+/-3.21		+/-4.69							
Mercury-203	U	-1.38	U	0.693	pCi/L	N/A		N/A			
	Uncertainty	+/-3.99		+/-6.70							
Neodymium-147	U	52.0	U	-67.5	pCi/L	N/A		N/A			
	Uncertainty	+/-98.3		+/-144							
Neptunium-239	U	17.1	U	-7.18	pCi/L	N/A		N/A			
	Uncertainty	+/-26.3		+/-33.4							
Niobium-94	U	-2.65	U	0.861	pCi/L	N/A		N/A			
	Uncertainty	+/-3.09		+/-4.18							
Niobium-95	U	-1.77	U	0.0465	pCi/L	N/A		N/A			
	Uncertainty	+/-5.77		+/-5.22							
Potassium-40	U	16.9	U	-39.2	pCi/L	N/A		N/A			
	Uncertainty	+/-41.1		+/-49.6							
Promethium-144	U	-0.167	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.49		+/-4.22							
Promethium-146	U	2.07	U	0.564	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-4.94							
Radium-228	U	-5.67	U	12.8	pCi/L	N/A		N/A			
	Uncertainty	+/-15.4		+/-16.7							
Ruthenium-106	U	-32.3	U	-8.66	pCi/L	N/A		N/A			
	Uncertainty	+/-30.1		+/-39.7							
Silver-110m	U	0.333	U	-0.439	pCi/L	N/A		N/A			
	Uncertainty	+/-3.01		+/-4.37							
Sodium-22	U	2.97	U	2.94	pCi/L	N/A		N/A			
	Uncertainty	+/-3.37		+/-3.85							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Thallium-208	U	0.537	U	-3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-5.66		+/-5.02							
Thorium-230	U	1110	U	1060	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-1700		+/-1480							
Thorium-234		311	U	-14.9	pCi/L	5.48		(0% - 100%)			
	Uncertainty	+/-263		+/-212							
Tin-113	U	0.995	U	-0.0199	pCi/L	N/A		N/A			
	Uncertainty	+/-4.39		+/-6.12							
Uranium-235	U	-3.7	U	14.6	pCi/L	N/A		N/A			
	Uncertainty	+/-24.9		+/-31.4							
Uranium-238		311	U	-14.9	pCi/L	5.48		(0% - 100%)			
	Uncertainty	+/-263		+/-212							
Yttrium-88	U	-0.603	U	4.04	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-4.91							
Zinc-65	U	-4.25	U	-1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-7.59		+/-8.30							
Zirconium-95	U	-5.26	U	5.91	pCi/L	N/A		N/A			
	Uncertainty	+/-7.27		+/-11.3							
QC1203362671	LCS										
Actinium-228			U	424	pCi/L					08/06/15	06:52
	Uncertainty			+/-1040							
Americium-241	1.10E+05			1.20E+05	pCi/L		108	(75%-125%)			
	Uncertainty			+/-3460							
Antimony-124			U	-135	pCi/L						
	Uncertainty			+/-180							
Antimony-125			U	183	pCi/L						
	Uncertainty			+/-553							
Barium-133			U	-30.8	pCi/L						
	Uncertainty			+/-227							
Barium-140			U	-617	pCi/L						
	Uncertainty			+/-1030							
Beryllium-7			U	-543	pCi/L						
	Uncertainty			+/-1860							
Bismuth-212			U	-903	pCi/L						
	Uncertainty			+/-2930							
Bismuth-214			U	-65	pCi/L						
	Uncertainty			+/-367							
Cerium-139			U	108	pCi/L						
	Uncertainty			+/-178							
Cerium-141			U	36.8	pCi/L						
	Uncertainty			+/-242							
Cerium-144			U	-261	pCi/L						
	Uncertainty			+/-1060							
Cesium-134			U	-10.2	pCi/L						
	Uncertainty										



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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Cesium-136			U	+/-234 -195	pCi/L				MJH1	08/06/15	06:52
	Uncertainty			+/-514							
Cesium-137	43900			45600	pCi/L		104	(75%-125%)			
	Uncertainty			+/-888							
Chromium-51		U		975	pCi/L						
	Uncertainty			+/-1610							
Cobalt-56		U		-93.8	pCi/L						
	Uncertainty			+/-247							
Cobalt-57				1920	pCi/L						
	Uncertainty			+/-220							
Cobalt-58		U		-74.4	pCi/L						
	Uncertainty			+/-232							
Cobalt-60	48800			51000	pCi/L		104	(75%-125%)			
	Uncertainty			+/-1120							
Europium-152		U		466	pCi/L						
	Uncertainty			+/-521							
Europium-154		U		351	pCi/L						
	Uncertainty			+/-344							
Europium-155		U		-50.6	pCi/L						
	Uncertainty			+/-519							
Iridium-192		U		21.0	pCi/L						
	Uncertainty			+/-168							
Iron-59		U		24.0	pCi/L						
	Uncertainty			+/-577							
Lead-210				1.14E+06	pCi/L						
	Uncertainty			+/-1.47E+05							
Lead-212		U		104	pCi/L						
	Uncertainty			+/-279							
Lead-214		U		-76.5	pCi/L						
	Uncertainty			+/-391							
Manganese-54		U		-22.8	pCi/L						
	Uncertainty			+/-226							
Mercury-203		U		20.5	pCi/L						
	Uncertainty			+/-173							
Neodymium-147		U		-209	pCi/L						
	Uncertainty			+/-1960							
Neptunium-239		U		-679	pCi/L						
	Uncertainty			+/-1410							
Niobium-94		U		-58.5	pCi/L						
	Uncertainty			+/-194							
Niobium-95		U		10.8	pCi/L						
	Uncertainty			+/-207							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Potassium-40			U	-279	pCi/L						
	Uncertainty			+/-829							
Promethium-144			U	42.8	pCi/L				MJH1	08/06/15	06:52
	Uncertainty			+/-170							
Promethium-146			U	143	pCi/L						
	Uncertainty			+/-309							
Radium-228			U	424	pCi/L						
	Uncertainty			+/-1040							
Ruthenium-106			U	-176	pCi/L						
	Uncertainty			+/-1700							
Silver-110m				4150	pCi/L						
	Uncertainty			+/-315							
Sodium-22			U	127	pCi/L						
	Uncertainty			+/-121							
Thallium-208			U	87.6	pCi/L						
	Uncertainty			+/-195							
Thorium-230			U	33100	pCi/L						
	Uncertainty			+/-82600							
Thorium-234			U	-12200	pCi/L						
	Uncertainty			+/-11600							
Tin-113			U	252	pCi/L						
	Uncertainty			+/-245							
Uranium-235			U	-232	pCi/L						
	Uncertainty			+/-874							
Uranium-238			U	-12200	pCi/L						
	Uncertainty			+/-11600							
Yttrium-88			U	-45.8	pCi/L						
	Uncertainty			+/-98.5							
Zinc-65				5220	pCi/L						
	Uncertainty			+/-988							
Zirconium-95			U	-104	pCi/L						
	Uncertainty			+/-365							
QC1203362669	MB										
Actinium-228			U	-4.65	pCi/L					08/06/15	06:51
	Uncertainty			+/-13.9							
Americium-241			U	2.93	pCi/L						
	Uncertainty			+/-15.4							
Antimony-124			U	3.20	pCi/L						
	Uncertainty			+/-7.59							
Antimony-125			U	-0.182	pCi/L						
	Uncertainty			+/-8.82							
Barium-133			U	2.76	pCi/L						
	Uncertainty			+/-4.07							
Barium-140			U	12.8	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1495870										
Beryllium-7	Uncertainty		U	+/-18.9	pCi/L				MJH1	08/06/15	06:51
				24.1							
Bismuth-212	Uncertainty		U	+/-32.6	pCi/L						
				-12.9							
Bismuth-214	Uncertainty		U	+/-45.5	pCi/L						
				0.544							
Cerium-139	Uncertainty		U	+/-9.31	pCi/L						
				1.63							
Cerium-141	Uncertainty		U	+/-2.70	pCi/L						
				-5.7							
Cerium-144	Uncertainty		U	+/-6.29	pCi/L						
				2.63							
Cesium-134	Uncertainty		U	+/-17.7	pCi/L						
				-0.489							
Cesium-136	Uncertainty		U	+/-4.07	pCi/L						
				1.77							
Cesium-137	Uncertainty		U	+/-8.46	pCi/L						
				-1.67							
Chromium-51	Uncertainty		U	+/-3.26	pCi/L						
				-14.9							
Cobalt-56	Uncertainty		U	+/-29.8	pCi/L						
				2.06							
Cobalt-57	Uncertainty		U	+/-3.43	pCi/L						
				2.11							
Cobalt-58	Uncertainty		U	+/-2.43	pCi/L						
				-0.0497							
Cobalt-60	Uncertainty		U	+/-2.67	pCi/L						
				-2.33							
Europium-152	Uncertainty		U	+/-2.80	pCi/L						
				-8.72							
Europium-154	Uncertainty		U	+/-11.4	pCi/L						
				-6.66							
Europium-155	Uncertainty		U	+/-7.53	pCi/L						
				0.400							
Iridium-192	Uncertainty		U	+/-9.72	pCi/L						
				1.88							
Iron-59	Uncertainty		U	+/-3.04	pCi/L						
				-5.33							
Lead-210	Uncertainty		U	+/-7.04	pCi/L						
				133							
Lead-212	Uncertainty		U	+/-554	pCi/L						
				4.48							
	Uncertainty			+/-7.96							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1495870										
Lead-214			U	8.16	pCi/L						
	Uncertainty			+/-12.1							
Manganese-54			U	-1.68	pCi/L				MJH1	08/06/15	06:51
	Uncertainty			+/-3.31							
Mercury-203			U	0.537	pCi/L						
	Uncertainty			+/-3.30							
Neodymium-147			U	-34.9	pCi/L						
	Uncertainty			+/-34.9							
Neptunium-239			U	-9.86	pCi/L						
	Uncertainty			+/-24.3							
Niobium-94			U	2.41	pCi/L						
	Uncertainty			+/-3.35							
Niobium-95			U	1.41	pCi/L						
	Uncertainty			+/-3.39							
Potassium-40			U	28.4	pCi/L						
	Uncertainty			+/-53.0							
Promethium-144			U	-3.33	pCi/L						
	Uncertainty			+/-5.96							
Promethium-146			U	1.20	pCi/L						
	Uncertainty			+/-3.79							
Radium-228			U	-4.65	pCi/L						
	Uncertainty			+/-13.9							
Ruthenium-106			U	-7.14	pCi/L						
	Uncertainty			+/-29.4							
Silver-110m			U	0.0959	pCi/L						
	Uncertainty			+/-2.70							
Sodium-22			U	-2.28	pCi/L						
	Uncertainty			+/-2.66							
Thallium-208			U	1.90	pCi/L						
	Uncertainty			+/-4.81							
Thorium-230			U	894	pCi/L						
	Uncertainty			+/-1380							
Thorium-234			U	16.5	pCi/L						
	Uncertainty			+/-158							
Tin-113			U	1.63	pCi/L						
	Uncertainty			+/-4.01							
Uranium-235			U	-7.91	pCi/L						
	Uncertainty			+/-23.2							
Uranium-238			U	16.5	pCi/L						
	Uncertainty			+/-158							
Yttrium-88			U	1.83	pCi/L						
	Uncertainty			+/-4.04							
Zinc-65			U	-5.06	pCi/L						
	Uncertainty			+/-7.56							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Zirconium-95			U	0.550	pCi/L						
	Uncertainty			+/-5.02							
Batch	1496184										
QC1203363416 378049003 DUP											
Actinium-228	U	-1.53	U	2.22	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-12.0		+/-9.36							
Americium-241	U	16.7	U	-0.133	pCi/L	N/A		N/A			
	Uncertainty	+/-13.6		+/-15.7							
Antimony-124	U	-1.17	U	-1.67	pCi/L	N/A		N/A			
	Uncertainty	+/-6.20		+/-6.23							
Antimony-125	U	7.54	U	-1.22	pCi/L	N/A		N/A			
	Uncertainty	+/-8.25		+/-6.83							
Barium-133	U	-1.13	U	-0.809	pCi/L	N/A		N/A			
	Uncertainty	+/-3.52		+/-3.24							
Barium-140	U	8.52	U	-1.83	pCi/L	N/A		N/A			
	Uncertainty	+/-13.6		+/-16.9							
Beryllium-7	U	-18.5	U	16.4	pCi/L	N/A		N/A			
	Uncertainty	+/-26.0		+/-21.2							
Bismuth-212	U	-24.2	U	10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-32.9		+/-33.1							
Bismuth-214	U	1.18	U	3.54	pCi/L	N/A		N/A			
	Uncertainty	+/-8.24		+/-7.67							
Cerium-139	U	1.09	U	-0.576	pCi/L	N/A		N/A			
	Uncertainty	+/-2.40		+/-2.55							
Cerium-141	U	-3.02	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-5.61		+/-5.35							
Cerium-144	U	2.09	U	6.05	pCi/L	N/A		N/A			
	Uncertainty	+/-17.2		+/-18.7							
Cesium-134	U	-3.94	U	-1.74	pCi/L	N/A		N/A			
	Uncertainty	+/-2.89		+/-2.59							
Cesium-136	U	0.936	U	0.484	pCi/L	N/A		N/A			
	Uncertainty	+/-5.52		+/-5.88							
Cesium-137	U	0.434	U	-0.133	pCi/L	N/A		N/A			
	Uncertainty	+/-2.57		+/-2.79							
Chromium-51	U	-9.01	U	0.410	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-25.0							
Cobalt-56	U	-0.42	U	-0.435	pCi/L	N/A		N/A			
	Uncertainty	+/-2.45		+/-2.74							
Cobalt-57	U	1.27	U	-0.147	pCi/L	N/A		N/A			
	Uncertainty	+/-2.11		+/-2.34							
Cobalt-58	U	0.704	U	0.414	pCi/L	N/A		N/A			
	Uncertainty	+/-2.49		+/-2.18							
Cobalt-60	U	-0.743	U	-3.76	pCi/L	N/A		N/A			
	Uncertainty	+/-2.86		+/-2.73							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Europium-152	U	-4.04	U	-5.02	pCi/L	N/A		N/A			
	Uncertainty	+/-7.07		+/-7.51							
Europium-154	U	7.32	U	1.70	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-9.11		+/-5.61							
Europium-155	U	-1.28	U	1.36	pCi/L	N/A		N/A			
	Uncertainty	+/-9.27		+/-9.50							
Iridium-192	U	-1.16	U	0.278	pCi/L	N/A		N/A			
	Uncertainty	+/-2.92		+/-2.38							
Iron-59	U	2.97	U	-1.43	pCi/L	N/A		N/A			
	Uncertainty	+/-4.89		+/-5.31							
Lead-210	U	-345	U	-59.1	pCi/L	N/A		N/A			
	Uncertainty	+/-415		+/-427							
Lead-212	U	3.13	U	2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-5.50		+/-6.64							
Lead-214	U	5.28	U	-4.98	pCi/L	N/A		N/A			
	Uncertainty	+/-8.09		+/-6.38							
Manganese-54	U	1.61	U	0.762	pCi/L	N/A		N/A			
	Uncertainty	+/-2.40		+/-2.55							
Mercury-203	U	-1.02	U	2.69	pCi/L	N/A		N/A			
	Uncertainty	+/-2.87		+/-2.98							
Neodymium-147	U	13.7	U	-6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-27.3		+/-32.7							
Neptunium-239	U	5.80	U	-3.3	pCi/L	N/A		N/A			
	Uncertainty	+/-23.8		+/-25.2							
Niobium-94	U	0.353	U	-1.27	pCi/L	N/A		N/A			
	Uncertainty	+/-2.57		+/-2.29							
Niobium-95	U	-1.35	U	-0.112	pCi/L	N/A		N/A			
	Uncertainty	+/-2.23		+/-2.26							
Potassium-40	U	-30.3	U	-26.3	pCi/L	N/A		N/A			
	Uncertainty	+/-33.4		+/-34.0							
Promethium-144	U	-2.1	U	0.049	pCi/L	N/A		N/A			
	Uncertainty	+/-2.61		+/-2.32							
Promethium-146	U	-0.0111	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-2.99							
Radium-228	U	-1.53	U	2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-9.36							
Ruthenium-106	U	13.6	U	18.3	pCi/L	N/A		N/A			
	Uncertainty	+/-21.7		+/-23.4							
Silver-110m	U	-2.14	U	-1.16	pCi/L	N/A		N/A			
	Uncertainty	+/-2.23		+/-2.51							
Sodium-22	U	2.58	U	0.551	pCi/L	N/A		N/A			
	Uncertainty	+/-3.21		+/-1.97							
Thallium-208	U	-2.31	U	2.30	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-4.08							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Thorium-230		1910	U	292	pCi/L	11.1		(0% - 100%)			
	Uncertainty	+/-1440		+/-1040							
Thorium-234	U	126	U	158	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-166		+/-171							
Tin-113	U	-1.81	U	0.779	pCi/L	N/A		N/A			
	Uncertainty	+/-3.12		+/-3.24							
Uranium-235	U	-9.34	U	20.8	pCi/L	N/A		N/A			
	Uncertainty	+/-20.2		+/-22.7							
Uranium-238	U	126	U	158	pCi/L	N/A		N/A			
	Uncertainty	+/-166		+/-171							
Yttrium-88	U	0.849	U	0.633	pCi/L	N/A		N/A			
	Uncertainty	+/-3.43		+/-2.89							
Zinc-65	U	-0.548	U	-3.11	pCi/L	N/A		N/A			
	Uncertainty	+/-4.98		+/-4.98							
Zirconium-95	U	-2.39	U	0.564	pCi/L	N/A		N/A			
	Uncertainty	+/-4.34		+/-3.96							
QC1203363417	LCS										
Actinium-228			U	408	pCi/L					08/04/15	07:04
	Uncertainty			+/-372							
Americium-241	34400			36400	pCi/L		106	(75%-125%)			
	Uncertainty			+/-952							
Antimony-124			U	-8.95	pCi/L						
	Uncertainty			+/-56.4							
Antimony-125			U	-4.24	pCi/L						
	Uncertainty			+/-202							
Barium-133			U	-13.1	pCi/L						
	Uncertainty			+/-85.7							
Barium-140			U	-54.8	pCi/L						
	Uncertainty			+/-289							
Beryllium-7			U	190	pCi/L						
	Uncertainty			+/-629							
Bismuth-212			U	-122	pCi/L						
	Uncertainty			+/-1030							
Bismuth-214			U	28.7	pCi/L						
	Uncertainty			+/-144							
Cerium-139			U	56.0	pCi/L						
	Uncertainty			+/-65.2							
Cerium-141			U	-137	pCi/L						
	Uncertainty			+/-103							
Cerium-144			U	-371	pCi/L						
	Uncertainty			+/-470							
Cesium-134			U	30.3	pCi/L						
	Uncertainty			+/-76.3							
Cesium-136			U	85.7	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Cesium-137	13700			+/-137							
	Uncertainty			14200	pCi/L		104	(75%-125%)	MJH1	08/04/15	07:04
Chromium-51			U	+/-300							
	Uncertainty			75.7	pCi/L						
Cobalt-56			U	+/-587							
	Uncertainty			37.9	pCi/L						
Cobalt-57				+/-78.3							
	Uncertainty			605	pCi/L						
Cobalt-58			U	+/-65.9							
	Uncertainty			51.9	pCi/L						
Cobalt-60	15200			+/-72.7							
	Uncertainty			15100	pCi/L		99.2	(75%-125%)			
Europium-152			U	+/-340							
	Uncertainty			49.6	pCi/L						
Europium-154			U	+/-194							
	Uncertainty			74.8	pCi/L						
Europium-155			U	+/-115							
	Uncertainty			-31.3	pCi/L						
Iridium-192			U	+/-220							
	Uncertainty			-29.8	pCi/L						
Iron-59			U	+/-64.5							
	Uncertainty			-194	pCi/L						
Lead-210				+/-164							
	Uncertainty			3.88E+05	pCi/L						
Lead-212			U	+/-12100							
	Uncertainty			-33.5	pCi/L						
Lead-214			U	+/-113							
	Uncertainty			96.0	pCi/L						
Manganese-54			U	+/-146							
	Uncertainty			23.4	pCi/L						
Mercury-203			U	+/-70.8							
	Uncertainty			21.3	pCi/L						
Neodymium-147			U	+/-66.2							
	Uncertainty			-321	pCi/L						
Neptunium-239			U	+/-562							
	Uncertainty			585	pCi/L						
Niobium-94			U	+/-636							
	Uncertainty			-39.6	pCi/L						
Niobium-95			U	+/-56.7							
	Uncertainty			15.6	pCi/L						
Potassium-40			U	+/-68.8							
	Uncertainty			28.9	pCi/L						
	Uncertainty			+/-269							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Promethium-144			U	10.2	pCi/L						
	Uncertainty			+/-58.9							
Promethium-146			U	-8.46	pCi/L				MJH1	08/04/15	07:04
	Uncertainty			+/-97.1							
Radium-228			U	408	pCi/L						
	Uncertainty			+/-372							
Ruthenium-106			U	-57.8	pCi/L						
	Uncertainty			+/-568							
Silver-110m				179	pCi/L						
	Uncertainty			+/-79.0							
Sodium-22			U	25.2	pCi/L						
	Uncertainty			+/-40.4							
Thallium-208			U	-30.6	pCi/L						
	Uncertainty			+/-65.0							
Thorium-230			U	26000	pCi/L						
	Uncertainty			+/-21900							
Thorium-234			U	-2030	pCi/L						
	Uncertainty			+/-2650							
Tin-113			U	46.0	pCi/L						
	Uncertainty			+/-89.2							
Uranium-235			U	-155	pCi/L						
	Uncertainty			+/-402							
Uranium-238			U	-2030	pCi/L						
	Uncertainty			+/-2650							
Yttrium-88			U	22.9	pCi/L						
	Uncertainty			+/-28.4							
Zinc-65				1740	pCi/L						
	Uncertainty			+/-351							
Zirconium-95			U	27.3	pCi/L						
	Uncertainty			+/-125							
QC1203363415	MB										
Actinium-228			U	-6.56	pCi/L					08/04/15	06:33
	Uncertainty			+/-11.2							
Americium-241			U	-14.7	pCi/L						
	Uncertainty			+/-17.7							
Antimony-124			U	-4.06	pCi/L						
	Uncertainty			+/-6.15							
Antimony-125			U	-3.72	pCi/L						
	Uncertainty			+/-6.11							
Barium-133			U	-2.01	pCi/L						
	Uncertainty			+/-2.84							
Barium-140			U	0.679	pCi/L						
	Uncertainty			+/-10.4							
Beryllium-7			U	12.1	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1496184										
				+/-17.7							
Bismuth-212			U	-11.4	pCi/L						
	Uncertainty			+/-29.1							
Bismuth-214			U	1.17	pCi/L						
	Uncertainty			+/-6.09							
Cerium-139			U	-1.91	pCi/L						
	Uncertainty			+/-1.93							
Cerium-141			U	2.24	pCi/L						
	Uncertainty			+/-3.19							
Cerium-144			U	-6.32	pCi/L						
	Uncertainty			+/-11.8							
Cesium-134			U	-0.174	pCi/L						
	Uncertainty			+/-2.79							
Cesium-136			U	-2.8	pCi/L						
	Uncertainty			+/-3.68							
Cesium-137			U	0.290	pCi/L						
	Uncertainty			+/-2.25							
Chromium-51			U	15.3	pCi/L						
	Uncertainty			+/-23.0							
Cobalt-56			U	-0.684	pCi/L						
	Uncertainty			+/-2.17							
Cobalt-57			U	1.99	pCi/L						
	Uncertainty			+/-1.66							
Cobalt-58			U	-0.202	pCi/L						
	Uncertainty			+/-2.50							
Cobalt-60			U	-0.089	pCi/L						
	Uncertainty			+/-2.13							
Europium-152			U	2.91	pCi/L						
	Uncertainty			+/-6.02							
Europium-154			U	-3.67	pCi/L						
	Uncertainty			+/-7.03							
Europium-155			U	-4.06	pCi/L						
	Uncertainty			+/-7.28							
Iridium-192			U	-0.775	pCi/L						
	Uncertainty			+/-2.11							
Iron-59			U	2.33	pCi/L						
	Uncertainty			+/-3.93							
Lead-210			U	653	pCi/L						
	Uncertainty			+/-679							
Lead-212			U	0.970	pCi/L						
	Uncertainty			+/-5.45							
Lead-214			U	1.86	pCi/L						
	Uncertainty			+/-6.19							

MJH1 08/04/15 06:33

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1496184										
Manganese-54			U	-0.327	pCi/L						
	Uncertainty			+/-1.86							
Mercury-203			U	1.17	pCi/L				MJH1	08/04/15	06:33
	Uncertainty			+/-2.06							
Neodymium-147			U	-11.4	pCi/L						
	Uncertainty			+/-19.6							
Neptunium-239			U	3.58	pCi/L						
	Uncertainty			+/-19.5							
Niobium-94			U	1.52	pCi/L						
	Uncertainty			+/-2.22							
Niobium-95			U	0.296	pCi/L						
	Uncertainty			+/-1.96							
Potassium-40			U	-8.45	pCi/L						
	Uncertainty			+/-31.7							
Promethium-144			UI	0.00	pCi/L						
	Uncertainty			+/-3.66							
Promethium-146			U	-1.01	pCi/L						
	Uncertainty			+/-2.62							
Radium-228			U	-6.56	pCi/L						
	Uncertainty			+/-11.2							
Ruthenium-106			U	-9.69	pCi/L						
	Uncertainty			+/-17.9							
Silver-110m			U	1.15	pCi/L						
	Uncertainty			+/-1.78							
Sodium-22			U	-1.15	pCi/L						
	Uncertainty			+/-2.45							
Thallium-208			U	-0.683	pCi/L						
	Uncertainty			+/-2.73							
Thorium-230			U	-756	pCi/L						
	Uncertainty			+/-1090							
Thorium-234			U	109	pCi/L						
	Uncertainty			+/-195							
Tin-113			U	1.56	pCi/L						
	Uncertainty			+/-2.55							
Uranium-235			U	-6.41	pCi/L						
	Uncertainty			+/-15.6							
Uranium-238			U	109	pCi/L						
	Uncertainty			+/-195							
Yttrium-88			U	1.67	pCi/L						
	Uncertainty			+/-2.63							
Zinc-65			U	-3.22	pCi/L						
	Uncertainty			+/-4.63							
Zirconium-95			U	-3.05	pCi/L						
	Uncertainty			+/-3.20							

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1497329										
QC1203366357	377742003	DUP									
Alpha				17.5		7.10	pCi/L	26.1	(0% - 100%)	KXB2	08/14/15 19:26
				Uncertainty		+/-9.58		+/-2.80			
Beta				102		135	pCi/L	12.8	(0%-20%)		
				Uncertainty		+/-12.3		+/-4.78			
QC1203366358	LCS										
Alpha				120		135	pCi/L		113	(75%-125%)	08/13/15 16:44
				Uncertainty		+/-12.7					
Beta				436		475	pCi/L		109	(75%-125%)	
				Uncertainty		+/-17.9					
QC1203366356	MB										
Alpha					U	0.0252	pCi/L				08/13/15 16:44
					Uncertainty	+/-1.59					
Beta					U	1.12	pCi/L				
					Uncertainty	+/-2.75					
Batch	1497331										
QC1203366360	377742023	DUP									
Alpha					U	3.23	U	3.41	pCi/L	N/A	N/A KXB2 08/14/15 13:34
					Uncertainty	+/-3.15		+/-3.11			
Beta						13.3		11.5	pCi/L	14.3	(0% - 100%)
					Uncertainty	+/-3.18		+/-2.93			
QC1203366361	LCS										
Alpha						120		128	pCi/L		107 (75%-125%) 08/13/15 13:26
						Uncertainty		+/-12.9			
Beta						436		514	pCi/L		118 (75%-125%)
						Uncertainty		+/-19.4			
QC1203366359	MB										
Alpha						U	0.652	pCi/L			08/14/15 13:31
						Uncertainty	+/-1.45				
Beta						U	-1.99	pCi/L			
						Uncertainty	+/-2.63				
Rad Liquid Scintillation											
Batch	1497815										
QC1203367506	377532001	DUP									
Technetium-99					U	-60.1	U	4.46	pCi/L	N/A	N/AMYM1 08/11/15 23:30
					Uncertainty	+/-122		+/-126			
QC1203367507	LCS										
Technetium-99						4300		3710	pCi/L		86.2 (75%-125%) 08/11/15 23:47
						Uncertainty		+/-242			
QC1203367505	MB										
Technetium-99						U	-6.89	pCi/L			08/11/15 23:14
						Uncertainty	+/-131				
Batch	1497817										
QC1203367509	377742011	DUP									
Technetium-99					U	32.4	U	-60.6	pCi/L	N/A	N/AMYM1 08/16/15 14:50
					Uncertainty	+/-130		+/-126			

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1497817										
QC1203367510	LCS										
Technetium-99	4300			3610	pCi/L		83.8	(75%-125%)	MYM1	08/17/15	09:00
	Uncertainty			+/-230							
QC1203367508	MB										
Technetium-99			U	2.42	pCi/L					08/16/15	14:34
	Uncertainty			+/-130							

### 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 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, 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

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## QC Summary

Workorder: 377742

Page 17 of 17

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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 18 August 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404



**Enclosure f)**

**GEL Lab Reports  
Tritium Results**



November 05, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 358799

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Sarah Edwards for  
Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358799

VENDOR: General Engineering Laboratories (GEL)Month: OctYear: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/6/14 10:05	250				X		REC
WELL	#3A	10/8/14 09:42	250				X		REC
WELL	#7	10/7/14 11:33	250				X		REC
WELL	#10	10/7/14 11:55	250				X		REC
WELL	#13R	10/7/14 11:10	250				X		REC
WELL	#14	10/6/14 14:15	250				X		REC
WELL	#15	10/6/14 12:22	250				X		REC
WELL	#16	10/6/14 14:30	250				X		REC
WELL	#17	10/8/14 11:50	250				X		REC
WELL	#18	10/7/14 10:12	250				X		REC
WELL	#20	10/7/14 14:07	250				X		REC
WELL	#22	10/7/14 09:54	250				X		REC
WELL	#23R	10/6/14 13:50	250				X		REC
WELL	#24	10/6/14 09:07	250				X		REC
WELL	#26	10/6/14 10:42	250				X		REC
WELL	#27	10/6/14 14:45	250				X		REC
WELL	#28	10/7/14 10:42	250				X		REC
WELL	#29	10/7/14 09:11	250				X		REC
WELL	#30	10/7/14 19:31	250				X		REC
WELL	#32	10/7/14 14:37	250				X		REC
WELL	#33	10/6/14 11:36	250				X		REC
WELL	#38	10/7/14 08:47	250				X		REC
WELL	#39	10/8/14 14:07	250				X		REC
WELL	#41R	10/6/14 10:22	250				X		REC
WELL	#43	10/8/14 14:30	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 10/9/14

Received:

Chelise Skye  
10/10/14 09:10

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# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

## Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358799

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: **2014**

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

[illegible]

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: **Randy Crews**

Date Shipped: **10/9/14**

Received:  
Chase George  
10/10/14 09:10

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Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>Westinghouse</u>			SDG/AR/COC/Work Order: <u>358799</u>		
Received By: <u>CAS</u>			Date Received: <u>10/10/14</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
COC/Samples marked as radioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>		
Classified Radioactive II or III by RSO?		/	If yes, Were swipes taken of sample containers < action levels?		
COC/Samples marked containing PCBs?		/			
Package, COC, and/or Samples marked as beryllium or asbestos containing?		/	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.		
Shipped as a DOT Hazardous?		/	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		/			

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 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		/		Preservation Method: Ice bags Blue ice Dry ice <u>(None)</u> Other (describe) *all temperatures are recorded in Celsius <u>23°C</u>
2a Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: <u>13041029102</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	/			
4 Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	/			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		/		Sample ID's and containers affected:
7 Are Encore containers present?			/	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	/			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11 Number of containers received match number indicated on COC?	/			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?			/	
13 COC form is properly signed in relinquished/received sections?	/			
14 Carrier and tracking number.	/			Circle Applicable: FedEx Air FedEx Ground <u>(UPS)</u> Field Services Courier Other  <u>1Z 222 210 01 9622 8251</u> <u>1Z 222 210 01 9514 8269</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 358799 GEL Work Order: 358799

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Richard Albee.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 358799001  
Matrix: Water  
Collect Date: 06-OCT-14 10:05  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-141	+/-287	550	700	pCi/L		BYS1	10/29/14	1918	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	358799002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 09:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Liquid "As Received"											
Tritium	U	145	+/-338	593	700	pCi/L		BYS1	10/29/14	1934 1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358799003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:33		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	176	+/-330	573	700	pCi/L		BYS1	10/29/14	1950	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358799004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:55		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Liquid "As Received"											
Tritium	U	2.23	+/-316	578	700	pCi/L		BYS1	10/29/14	2007 1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358799005  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	143	+/-325	569	700	pCi/L		BYS1	10/29/14	2023	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358799006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:15		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	275	+/-350	593	700	pCi/L		BYS1	10/29/14	2039	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358799007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:22		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	272	+/-343	582	700	pCi/L		BYS1	10/29/14	2056	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	358799008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.2	+/-315	583	700	pCi/L		BYS1	10/29/14	2112	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358799009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 11:50		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-73.9	+/-306	573	700	pCi/L		BYS1	10/29/14	2128	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	358799010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:12		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	159	+/-328	573	700	pCi/L		BYS1	10/29/14	2145	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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Company : Westinghouse Electric Company, LLC  
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	358799011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.8	+/-316	586	700	pCi/L		BYS1	10/29/14	2201	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358799012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:54		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-143	+/-308	588	700	pCi/L		BYS1	10/29/14	2217	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358799013  
Matrix: Water  
Collect Date: 06-OCT-14 13:50  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	161	+/-339	591	700	pCi/L		BYS1	10/29/14	2234	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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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: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	358799014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 09:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	226	+/-342	588	700	pCi/L		BYS1	10/29/14	2250	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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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: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358799015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	34.3	+/-324	586	700	pCi/L		BYS1	10/29/14	2306	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	358799016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:45		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-78.5	+/-314	588	700	pCi/L		BYS1	10/29/14	2323	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358799017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-161	+/-371	695	700	pCi/L		BYS1	10/31/14	0433	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358799018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:11		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-359	+/-355	696	700	pCi/L		BYS1	10/31/14	0449	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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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: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358799019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 19:31		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-410	+/-342	681	700	pCi/L		BYS1	10/31/14	0505	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	358799020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:37		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-74.8	+/-369	678	700	pCi/L		BYS1	10/31/14	0522	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	358799021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:36		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-250	+/-358	684	700	pCi/L		BYS1	10/31/14	0538	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	358799022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 08:47		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-201	+/-362	684	700	pCi/L		BYS1	10/31/14	0554	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358799023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-284	+/-351	677	700	pCi/L		BYS1	10/31/14	0611	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R

Sample ID: 358799024

Matrix: Water

Collect Date: 06-OCT-14 10:22

Receive Date: 10-OCT-14

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-123	+/-365	677	700	pCi/L		BYS1	10/31/14	0627	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	358799025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-310	+/-357	693	700	pCi/L		BYS1	10/31/14	0643	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	358799026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:00		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-179	+/-369	694	700	pCi/L		BYS1	10/31/14	0700	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358799027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 10:25		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-155	+/-364	680	700	pCi/L		BYS1	10/31/14	0716	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	358799028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:05		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	32.1	+/-384	690	700	pCi/L		BYS1	10/31/14	0732	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358799029  
Matrix: Water  
Collect Date: 08-OCT-14 09:42  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-128	+/-375	697	700	pCi/L		BYS1	10/31/14	0749	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl

Sample ID: 358799030

Matrix: Water

Collect Date: 07-OCT-14 11:10

Receive Date: 10-OCT-14

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	84.4	+/-278	491	700	pCi/L		BYS1	11/03/14	1829	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38 Dupl	Project:	WNUC00127
Sample ID:	358799031	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 08:47		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	385	+/-416	696	700	pCi/L		BYS1	10/31/14	0821	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: November 5, 2014

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 358799

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1429940										
QC1203193936	358799001	DUP									
Tritium		U	-141	U	-78.9	pCi/L	N/A		N/A	BYS1	10/29/14 23:55
		Uncertainty	+/-287		+/-315						
QC1203193938	LCS										
Tritium		1900			1720	pCi/L	90.6	(75%-125%)			10/30/14 00:28
		Uncertainty			+/-439						
QC1203193935	MB										
Tritium				U	81.8	pCi/L					10/29/14 23:39
		Uncertainty			+/-326						
QC1203193937	358799001	MS									
Tritium		1900	U	-141	1840	pCi/L	96.7	(75%-125%)			10/30/14 00:12
		Uncertainty		+/-287	+/-466						
Batch	1429941										
QC1203193940	358799017	DUP									
Tritium		U	-161	U	220	pCi/L	N/A		N/A	BYS1	11/03/14 18:50
		Uncertainty	+/-371		+/-288						
QC1203193942	LCS										
Tritium		1900			1960	pCi/L	103	(75%-125%)			10/31/14 09:27
		Uncertainty			+/-509						
QC1203193939	MB										
Tritium				U	-277	pCi/L					10/31/14 08:38
		Uncertainty			+/-360						
QC1203193941	358799017	MS									
Tritium		1900	U	-161	1780	pCi/L	93.4	(75%-125%)			10/31/14 09:10
		Uncertainty		+/-371	+/-510						

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 358799

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**



**List of current GEL Certifications as of 05 November 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



February 13, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 365773

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 26, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

3764

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

365773

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/12/15 10:34	250				X		REC
WELL	#3A	1/21/15 11:36	250				X		REC
WELL	#7	1/19/15 13:56	250				X		REC
WELL	#10	1/19/15 14:15	250				X		REC
WELL	#13R	1/19/15 11:39	250				X		REC
WELL	#14	1/20/15 14:27	250				X		REC
WELL	#15	1/20/15 11:14	250				X		REC
WELL	#16	1/20/15 11:33	250				X		REC
WELL	#17	1/20/15 09:20	250				X		REC
WELL	#18	1/19/15 10:38	250				X		REC
WELL	#20	1/21/15 10:40	250				X		REC
WELL	#22	1/19/15 10:16	250				X		REC
WELL	#23R	1/20/15 14:03	250				X		REC
WELL	#24	1/20/15 08:45	250				X		REC
WELL	#26	1/12/15 10:12	250				X		REC
WELL	#27	1/21/15 11:05	250				X		REC
WELL	#28	1/19/15 11:14	250				X		REC
WELL	#29	1/19/15 09:33	250				X		REC
WELL	#30	1/19/15 09:53	250				X		REC
WELL	#32	1/19/15 14:38	250				X		REC
WELL	#33	1/20/15 10:26	250				X		REC
WELL	#38	1/19/15 09:05	250				X		REC
WELL	#39	1/20/15 09:44	250				X		REC
WELL	#41R	1/12/15 10:52	250				X		REC
WELL	#43	1/20/15 10:07	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/23/15

Printed Copies are Uncontrolled

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Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.

Rec'd: *[Signature]* 26 JAN 15 0925





Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WESTING HOUSE</u>		SDG/AR/COC/Work Order: <u>365772, 365773</u>	
Received By: <u>GUS CHANDLER</u>		Date Received: <u>26 JAN 15</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags    Blue ice    Dry ice    None    Other (describe) <u>13°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462966</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground <u>UPS</u> Field Services    Courier    Other  <u>12 222 210 03 9024 5392</u> <u>12 222 210 03 9012 5986</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 365773 GEL Work Order: 365773

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365773001  
Matrix: Water  
Collect Date: 12-JAN-15 10:34  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	21.2	+/-311	565	700	pCi/L		BYS1	02/06/15	2354	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	365773002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:36		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	51.3	+/-315	568	700	pCi/L		BYS1	02/07/15	0011	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365773003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 13:56		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	115	+/-322	570	700	pCi/L		BYS1	02/07/15	0027	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365773004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:15		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	50.6	+/-321	578	700	pCi/L		BYS1	02/07/15	0043	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R

Sample ID: 365773005

Matrix: Water

Collect Date: 19-JAN-15 11:39

Receive Date: 26-JAN-15

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	336	+/-343	572	700	pCi/L		BYS1	02/07/15	0059	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365773006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 14:27		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-45.6	+/-312	579	700	pCi/L		BYS1	02/07/15	0116	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365773007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	81.7	+/-326	582	700	pCi/L		BYS1	02/07/15	0132	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	365773008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	337	+/-346	576	700	pCi/L		BYS1	02/07/15	0148	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365773009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:20		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	50.2	+/-325	585	700	pCi/L		BYS1	02/07/15	0205	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365773010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	257	+/-335	569	700	pCi/L		BYS1	02/07/15	0221	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	365773011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 10:40		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	19.2	+/-319	580	700	pCi/L		BYS1	02/07/15	0237	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	365773012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:16		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	175	+/-318	552	700	pCi/L		BYS1	02/07/15	0254	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R

Sample ID: 365773013

Matrix: Water

Collect Date: 20-JAN-15 14:03

Receive Date: 26-JAN-15

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	81.7	+/-324	579	700	pCi/L		BYS1	02/07/15	0310	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	365773014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 08:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	164	+/-333	580	700	pCi/L		BYS1	02/07/15	0326	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	365773015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:12		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	4.07	+/-336	612	700	pCi/L		BYS1	02/06/15	1353	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	365773016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	432	+/-371	607	700	pCi/L		BYS1	02/06/15	1410	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	365773018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Liquid "As Received"											
Tritium	U	-84.1	+/-323	603	700	pCi/L		BYS1	02/06/15	1426 1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	365773019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:53		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	21.6	+/-338	612	700	pCi/L		BYS1	02/06/15	1442	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	365773021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:26		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	109	+/-342	605	700	pCi/L		BYS1	02/06/15	1459	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365773022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	157	+/-359	628	700	pCi/L		BYS1	02/06/15	1515	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365773023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:44		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	20.2	+/-337	611	700	pCi/L		BYS1	02/06/15	1531	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R

Sample ID: 365773024

Matrix: Water

Collect Date: 12-JAN-15 10:52

Receive Date: 26-JAN-15

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-91.2	+/-329	615	700	pCi/L		BYS1	02/06/15	1548	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365773025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:07		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-15.2	+/-341	625	700	pCi/L		BYS1	02/06/15	1604	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	365773026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:54		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-13	+/-325	595	700	pCi/L		BYS1	02/06/15	1620	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365773027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 09:43		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	40.5	+/-340	614	700	pCi/L		BYS1	02/06/15	1637	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	365773028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 09:55		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Liquid "As Received"											
Tritium	U	-48.7	+/-329	608	700	pCi/L		BYS1	02/06/15	1653 1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## QC Summary

Report Date: February 13, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 365773

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1454245										
QC1203255055	365773001	DUP									
Tritium		U	21.2	U	67.9	pCi/L	N/A		N/A	BYS1	02/07/15 03:59
		Uncertainty	+/-311		+/-317						
QC1203255057	LCS										
Tritium		1870			1950	pCi/L	105	(75%-125%)			02/07/15 04:32
		Uncertainty			+/-466						
QC1203255054	MB										
Tritium				U	50.8	pCi/L					02/07/15 03:43
		Uncertainty			+/-317						
QC1203255056	365773001	MS									
Tritium		1870	U	21.2	1640	pCi/L	87.5	(75%-125%)			02/07/15 04:15
		Uncertainty		+/-311	+/-446						
Batch	1454246										
QC1203255064	365773015	DUP									
Tritium		U	4.07	U	-159	pCi/L	N/A		N/A	BYS1	02/06/15 17:26
		Uncertainty	+/-336		+/-319						
QC1203255066	LCS										
Tritium		1870			1410	pCi/L	75.3	(75%-125%)			02/06/15 17:58
		Uncertainty			+/-439						
QC1203255063	MB										
Tritium				U	-253	pCi/L					02/06/15 17:09
		Uncertainty			+/-310						
QC1203255065	365773015	MS									
Tritium		1870	U	4.07	2130	pCi/L	114	(75%-125%)			02/06/15 17:42
		Uncertainty		+/-336	+/-494						

### 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 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

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365773

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 13 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12



February 24, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 366457

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 04, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures







Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>366456, 366457</u>	
Received By: <u>P. Went</u>		Date Received: <u>2-4-15</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0/cpm</u>
Classified Radioactive II or III by RSO?		X	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		X	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		X	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: <u>Ice bags</u> Blue ice    Dry ice    None    Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>130462966</u>
3 Chain of custody documents included with shipment?	X			
4 Sample containers intact and sealed?	X			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	X			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11 Number of containers received match number indicated on COC?	X			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?			X	
13 COC form is properly signed in relinquished/received sections?	X			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground    UPS    Field Services <u>Courier</u> Other  <u>Self Courier</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 366457 GEL Work Order: 366457

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 24, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	366457001	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	29-JAN-15 11:15		
Receive Date:	04-FEB-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	330	+/-321	534	700	pCi/L		BYS1	02/16/15	1313	1456871	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 24, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	366457002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	29-JAN-15 11:40		
Receive Date:	04-FEB-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-35.3	+/-295	530	700	pCi/L		BYS1	02/16/15	1344	1456871	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: February 24, 2015

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 366457

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1456871										
QC1203262323	366457001	DUP									
Tritium		U	330	U	-30.5	pCi/L	N/A		N/A	BYS1	02/16/15 14:48
		Uncertainty	+/-321		+/-301						
QC1203262325	LCS										
Tritium		1860			1800	pCi/L	96.3	(75%-125%)			02/16/15 15:51
		Uncertainty			+/-397						
QC1203262322	MB										
Tritium			U		90.6	pCi/L					02/16/15 14:16
		Uncertainty			+/-304						
QC1203262324	366457001	MS									
Tritium		1870	U	330	2070	pCi/L	111	(75%-125%)			02/16/15 15:19
		Uncertainty	+/-321		+/-412						

### 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 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, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 366457

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 24 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12



May 18, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Ground Water Well Liquid Analysis  
Work Order: 371596

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: April

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. ~~Acidify the sample following filtration.~~ If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan. *ZHF 04/22/15*

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/9/15 09:46	250				X		REC
WELL	#3A	4/16/15 09:18	250				X		REC
WELL	#7	4/13/15 11:28	250				X		REC
WELL	#10	4/13/15 11:43	250				X		REC
WELL	#13R	4/13/15 11:08	250				X		REC
WELL	#14	4/14/15 11:37	250				X		REC
WELL	#15	4/14/15 10:55	250				X		REC
WELL	#16	4/14/15 11:52	250				X		REC
WELL	#17	4/14/15 09:01	250				X		REC
WELL	#18	4/13/15 10:17	250				X		REC
WELL	#20	4/16/15 10:05	250				X		REC
WELL	#22	4/13/15 09:58	250				X		REC
WELL	#23R	4/14/15 11:13	250				X		REC
WELL	#24	4/14/15 08:26	250				X		REC
WELL	#26	4/9/15 10:57	250				X		REC
WELL	#27	4/16/15 09:40	250				X		REC
WELL	#28	4/13/15 10:40	250				X		REC
WELL	#29	4/13/15 09:19	250				X		REC
WELL	#30	4/13/15 09:38	250				X		REC
WELL	#32	4/13/15 12:03	250				X		REC
WELL	#33	4/14/15 10:10	250				X		REC
WELL	#38	4/13/15 08:57	250				X		REC
WELL	#39	4/14/15 09:28	250				X		REC
WELL	#41R	4/9/15 10:09	250				X		REC
WELL	#43	4/14/15 09:50	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews *R Crews*

Date Shipped: 4/22/15

Printed Copies are Uncontrolled

*DATE - 4-22-15 TIME - 16:30*

Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.







Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client:		SDG/AR/COC/Work Order: 371596	
Received By: P. J. Dent		Date Received: 4.22.15	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0/cpm
Classified Radioactive II or III by RSO?		X	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		X	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		X	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		X		Preservation Method: Ice bags   Blue ice   Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius 17c
2a	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): 201404336
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	Do Low Level Perchlorate samples (EPA 6850) have headspace as required?		X		Sample ID's and containers affected:
7	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
8	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
9	Samples received within holding time?	X			ID's and tests affected:
10	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
11	Date & time on COC match date & time on bottles?	X			Sample ID's affected:
12	Number of containers received match number indicated on COC?	X			Sample ID's affected:
13	Are sample containers identifiable as GEL provided?			X	
14	COC form is properly signed in relinquished/received sections?	X			
15	Carrier and tracking number.				Circle Applicable: FedEx Air   FedEx Ground   UPS <u>Field Services</u> <u>Courier</u> Other  Gels

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 371596 GEL Work Order: 371596

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371596001  
Matrix: Ground Water  
Collect Date: 09-APR-15 09:46  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	57.8	+/-338	608	700	pCi/L		GXR1	05/14/15	1213	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 3A	Project:	WNUC00129
Sample ID:	371596002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:18		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	320	+/-364	611	700	pCi/L		GXR1	05/14/15	1229	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	371596003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	49.5	+/-347	625	700	pCi/L		GXR1	05/14/15	1245	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	371596004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:43		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	115	+/-354	626	700	pCi/L		GXR1	05/14/15	1302	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371596005  
Matrix: Ground Water  
Collect Date: 13-APR-15 11:08  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	164	+/-357	625	700	pCi/L		GXR1	05/14/15	1318	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	371596006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:37		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-135	+/-328	621	700	pCi/L		GXR1	05/14/15	1334	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	371596007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:55		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-67.7	+/-336	625	700	pCi/L		GXR1	05/14/15	1350	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	371596008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:52		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	96.2	+/-347	617	700	pCi/L		GXR1	05/14/15	1407	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	371596009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:01		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	31.0	+/-343	621	700	pCi/L		GXR1	05/14/15	1423	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	371596010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 10:17		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-35.7	+/-338	623	700	pCi/L		GXR1	05/14/15	1439	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	371596011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 10:05		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	306	+/-364	614	700	pCi/L		GXR1	05/14/15	1455	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	371596012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:58		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-67.3	+/-338	628	700	pCi/L		GXR1	05/14/15	1512	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371596013  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:13  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-101	+/-329	618	700	pCi/L		GXR1	05/14/15	1528	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371596014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 08:26		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-101	+/-331	621	700	pCi/L		GXR1	05/14/15	1544	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	371596015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	18.6	+/-306	546	700	pCi/L		GXR1	05/16/15	0313	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	371596016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-152	+/-290	538	700	pCi/L		GXR1	05/16/15	0344	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	371596017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 10:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-128	+/-304	560	700	pCi/L		GXR1	05/16/15	0416	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	371596018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:19		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	68.9	+/-290	510	700	pCi/L		GXR1	05/16/15	0447	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 30	Project:	WNUC00129
Sample ID:	371596019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:38		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-258	+/-318	601	700	pCi/L		GXR1	05/16/15	0518	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 32	Project:	WNUC00129
Sample ID:	371596020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 12:03		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-25.1	+/-355	656	700	pCi/L		GXR1	05/14/15	2340	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 33	Project:	WNUC00129
Sample ID:	371596021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:10		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-186	+/-299	558	700	pCi/L		GXR1	05/16/15	0549	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	371596022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 08:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	66.9	+/-301	530	700	pCi/L		GXR1	05/16/15	0620	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	371596023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	99.8	+/-298	521	700	pCi/L		GXR1	05/16/15	0651	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371596024  
Matrix: Ground Water  
Collect Date: 09-APR-15 10:09  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-18.6	+/-283	508	700	pCi/L		GXR1	05/16/15	0722	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	371596025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:50		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-152	+/-290	538	700	pCi/L		GXR1	05/16/15	0753	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	371596026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:34		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	29.9	+/-302	537	700	pCi/L		GXR1	05/16/15	0825	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371596027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 11:21		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-85	+/-279	510	700	pCi/L		GXR1	05/16/15	0856	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	371596028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:35		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-20.3	+/-286	514	700	pCi/L		GXR1	05/16/15	0927	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## QC Summary

Report Date: May 18, 2015

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 371596

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1476970										
QC1203313903	371596001	DUP									
Tritium	U	57.8	U	-39.6	pCi/L	N/A		N/A GXR1		05/14/15	16:17
	Uncertainty	+/-338		+/-328							
QC1203313905	LCS										
Tritium	1840			1830	pCi/L		99.6	(75%-125%)		05/14/15	16:49
	Uncertainty			+/-481							
QC1203313902	MB										
Tritium			U	154	pCi/L					05/14/15	16:01
	Uncertainty			+/-361							
QC1203313904	371596001	MS									
Tritium	1850 U	57.8		1860	pCi/L		101	(75%-125%)		05/14/15	16:33
	Uncertainty	+/-338		+/-486							
Batch	1476971										
QC1203313907	371596015	DUP									
Tritium	U	18.6	U	-169	pCi/L	N/A		N/A GXR1		05/16/15	10:29
	Uncertainty	+/-306		+/-268							
QC1203313909	LCS										
Tritium	1840			1630	pCi/L		88.6	(75%-125%)		05/15/15	02:53
	Uncertainty			+/-567							
QC1203313906	MB										
Tritium			U	-72.7	pCi/L					05/16/15	09:58
	Uncertainty			+/-295							
QC1203313908	371596015	MS									
Tritium	1850 U	18.6		1810	pCi/L		97.9	(75%-125%)		05/15/15	02:37
	Uncertainty	+/-306		+/-544							

### 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 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



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 371596

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 18 May 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

August 06, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

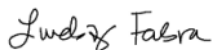
Re: Ground Water Well Liquid Analysis  
Work Order: 377746

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,



Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: July

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

377746

NOTE: Filter each sample prior to radiological analysis. ~~Acidify the sample following filtration.~~ If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan. 217F 07/22/15

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/10/15 09:32	250				X		REC
WELL	#3A	7/16/15 10:35	250				X		REC
WELL	#7	7/13/15 11:32	250				X		REC
WELL	#10	7/13/15 14:05	250				X		REC
WELL	#13R	7/13/15 11:05	250				X		REC
WELL	#14	7/10/15 14:22	250				X		REC
WELL	#15	7/10/15 12:12	250				X		REC
WELL	#16	7/10/15 14:40	250				X		REC
WELL	#17	7/15/15 09:35	250				X		REC
WELL	#18	7/13/15 10:10	250				X		REC
WELL	#20	7/16/15 09:34	250				X		REC
WELL	#22	7/13/15 09:51	250				X		REC
WELL	#23R	7/10/15 13:51	250				X		REC
WELL	#24	7/10/15 11:18	250				X		REC
WELL	#26	7/10/15 10:10	250				X		REC
WELL	#27	7/16/15 09:55	250				X		REC
WELL	#28	7/13/15 10:38	250				X		REC
WELL	#29	7/13/15 09:09	250				X		REC
WELL	#30	7/13/15 09:30	250				X		REC
WELL	#32	7/13/15 14:25	250				X		REC
WELL	#33	7/10/15 08:46	250				X		REC
WELL	#38	7/13/15 08:45	250				X		REC
WELL	#39	7/15/15 10:09	250				X		REC
WELL	#41R	7/10/15 09:53	250				X		REC
WELL	#43	7/15/15 10:31	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 7/22/15

Printed Copies are Uncontrolled

Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13



## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <b>WNUC</b>		SDG/AR/COC/Work Order: <b>377746</b>	
Received By: <b>ZW</b>		Date Received: <b>7/22/15</b>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <b>0cpm</b>	
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: Ice bags <b>Blue ice</b> Dry ice <input checked="" type="checkbox"/> None Other (describe) *all temperatures are recorded in Celsius <b>23°C</b>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <b>1304629666</b>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
8 Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <b>Courier</b> Other  <b>GEL</b>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 377746 GEL Work Order: 377746

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377746001  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:32  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-110	+/-290	531	700	pCi/L		GXR1	08/03/15	2310	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 3A	Project:	WNUC00129
Sample ID:	377746002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 10:35		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-236	+/-283	535	700	pCi/L		GXR1	08/03/15	2332	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377746003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 11:32		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-205	+/-283	531	700	pCi/L		GXR1	08/03/15	2353	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	377746004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:05		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-269	+/-282	536	700	pCi/L		GXR1	08/04/15	0015	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377746005  
Matrix: Ground Water  
Collect Date: 13-JUL-15 11:05  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-15	+/-296	530	700	pCi/L		GXR1	08/04/15	0036	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	377746006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:22		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-75.9	+/-296	539	700	pCi/L		GXR1	08/04/15	0058	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377746007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 12:12		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-140	+/-293	540	700	pCi/L		GXR1	08/04/15	0119	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	377746008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:40		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-226	+/-283	534	700	pCi/L		GXR1	08/04/15	0140	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	377746009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 09:35		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-44.3	+/-297	536	700	pCi/L		GXR1	08/04/15	0202	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	377746010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-1.83	+/-300	536	700	pCi/L		GXR1	08/04/15	0223	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	377746011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:34		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	19.7	+/-302	536	700	pCi/L		GXR1	08/04/15	0245	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	377746012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:51		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-236	+/-281	531	700	pCi/L		GXR1	08/04/15	1637	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377746013  
Matrix: Ground Water  
Collect Date: 10-JUL-15 13:51  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-205	+/-287	538	700	pCi/L		GXR1	08/04/15	1658	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	377746014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:18		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-300	+/-278	534	700	pCi/L		GXR1	08/04/15	1720	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377746015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-108	+/-291	540	700	pCi/L		GXR1	08/03/15	1813	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	377746016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:55		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	20.2	+/-296	530	700	pCi/L		GXR1	08/03/15	1835	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	377746017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:38		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	129	+/-314	547	700	pCi/L		GXR1	08/03/15	1856	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377746018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-33.2	+/-299	543	700	pCi/L		GXR1	08/03/15	1917	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 30	Project:	WNUC00129
Sample ID:	377746019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:30		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-24.4	+/-296	536	700	pCi/L		GXR1	08/03/15	1939	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 32	Project:	WNUC00129
Sample ID:	377746020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:25		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.7	+/-296	540	700	pCi/L		GXR1	08/03/15	2000	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 33	Project:	WNUC00129
Sample ID:	377746021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 08:46		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	38.6	+/-303	540	700	pCi/L		GXR1	08/03/15	2021	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	377746022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 08:45		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	140	+/-305	530	700	pCi/L		GXR1	08/03/15	2043	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	377746023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-144	+/-289	540	700	pCi/L		GXR1	08/03/15	2104	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377746024  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:53  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-119	+/-292	542	700	pCi/L		GXR1	08/03/15	2125	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	377746025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:31		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-96.3	+/-291	538	700	pCi/L		GXR1	08/03/15	2147	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	377746026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-230	+/-279	536	700	pCi/L		GXR1	08/03/15	2208	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377746027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:00		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	135	+/-310	539	700	pCi/L		GXR1	08/03/15	2230	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	377746028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	96.5	+/-305	536	700	pCi/L		GXR1	08/03/15	2251	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: August 6, 2015

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 377746

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1496499										
QC1203364256	377746001	DUP									
Tritium	U	-110	U	-11.1	pCi/L	N/A		N/A GXR1		08/04/15	18:03
	Uncertainty	+/-290		+/-289							
QC1203364258	LCS										
Tritium	1820			1610	pCi/L		88.8	(75%-125%)		08/04/15	18:46
	Uncertainty			+/-393							
QC1203364255	MB										
Tritium			U	-151	pCi/L					08/04/15	17:41
	Uncertainty			+/-288							
QC1203364257	377746001	MS									
Tritium	1820 U	-110		1510	pCi/L		83.1	(75%-125%)		08/04/15	18:24
	Uncertainty	+/-290		+/-396							
Batch	1496501										
QC1203364260	377746015	DUP									
Tritium	U	-108	U	-1.36	pCi/L	N/A		N/A GXR1		08/03/15	23:34
	Uncertainty	+/-291		+/-297							
QC1203364262	LCS										
Tritium	1820			1670	pCi/L		91.7	(75%-125%)		08/04/15	00:16
	Uncertainty			+/-412							
QC1203364259	MB										
Tritium			U	-155	pCi/L					08/03/15	23:12
	Uncertainty			+/-289							
QC1203364261	377746015	MS									
Tritium	1820 U	-108		1930	pCi/L		106	(75%-125%)		08/03/15	23:55
	Uncertainty	+/-291		+/-423							

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 377746

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 06 August 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404



**Enclosure g)**

**Westinghouse Electric Company Lab Reports  
pH, Ammonia, Fluoride, and Conductivity Results**

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2014115778	pH	7.16		10/10/14 20:51	Rugh
Well #10	2014115779	pH	5.60		10/10/14 20:51	Rugh
Well #13	2014115780	pH	6.51		10/10/14 20:52	Rugh
Well #13duplicate	2014115781	pH	6.50		10/10/14 20:52	Rugh
Well #18	2014115782	pH	7.58		10/10/14 20:52	Rugh
Well #22	2014115783	pH	5.26		10/10/14 20:53	Rugh
Well #28	2014115784	pH	5.98		10/10/14 20:53	Rugh
Well #29	2014115785	pH	7.02		10/10/14 20:53	Rugh
Well #30	2014115786	pH	6.66		10/10/14 20:54	Rugh
Well #32	2014115787	pH	7.00		10/10/14 20:54	Rugh
Well #38	2014115788	pH	5.30		10/10/14 20:54	Rugh
Well #38duplicate	2014115789	pH	5.26		10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2014115778	Cond	1927.0	umho/cm	10/10/14 20:51	Rugh
Well #10	2014115779	Cond	912.0	umho/cm	10/10/14 20:51	Rugh
Well #13	2014115780	Cond	814.0	umho/cm	10/10/14 20:52	Rugh
Well #13duplicate	2014115781	Cond	789.0	umho/cm	10/10/14 20:52	Rugh
Well #18	2014115782	Cond	5380.0	umho/cm	10/10/14 20:53	Rugh
Well #22	2014115783	Cond	2720.0	umho/cm	10/10/14 20:53	Rugh
Well #28	2014115784	Cond	2830.0	umho/cm	10/10/14 20:53	Rugh
Well #29	2014115785	Cond	837.0	umho/cm	10/10/14 20:54	Rugh
Well #30	2014115786	Cond	763.0	umho/cm	10/10/14 20:54	Rugh
Well #32	2014115787	Cond	1465.0	umho/cm	10/10/14 20:54	Rugh
Well #38	2014115788	Cond	293.0	umho/cm	10/10/14 20:54	Rugh
Well #38duplicate	2014115789	Cond	295.0	umho/cm	10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2014115778	F	7.50	ppm	10/10/14 20:51	Rugh
Well #10	2014115779	F	3.31	ppm	10/10/14 20:51	Rugh
Well #13	2014115780	F	10.3	ppm	10/10/14 20:52	Rugh
Well #13duplicate	2014115781	F	9.70	ppm	10/10/14 20:52	Rugh
Well #18	2014115782	F	7.40	ppm	10/10/14 20:53	Rugh
Well #22	2014115783	F	9.80	ppm	10/10/14 20:53	Rugh
Well #28	2014115784	F	5.70	ppm	10/10/14 20:53	Rugh
Well #29	2014115785	F	6.05	ppm	10/10/14 20:53	Rugh
Well #30	2014115786	F	11.5	ppm	10/10/14 20:54	Rugh
Well #32	2014115787	F	5.10	ppm	10/10/14 20:54	Rugh
Well #38	2014115788	F	<0.500	ppm	10/10/14 20:54	Rugh
Well #38duplicate	2014115789	F	<0.500	ppm	10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115790</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2014115790	NH3-N	57.0	ppm	10/09/14 20:52	Rugh
Well #10	2014115791	NH3-N	5.03	ppm	10/09/14 20:52	Rugh
Well #13	2014115792	NH3-N	48.7	ppm	10/09/14 20:52	Rugh
Well #13duplicate	2014115793	NH3-N	46.2	ppm	10/09/14 20:53	Rugh
Well #18	2014115794	NH3-N	141	ppm	10/09/14 20:53	Rugh
Well #22	2014115795	NH3-N	72.9	ppm	10/09/14 20:53	Rugh
Well #28	2014115796	NH3-N	1.53	ppm	10/09/14 20:54	Rugh
Well #29	2014115797	NH3-N	15.3	ppm	10/09/14 20:54	Rugh
Well #30	2014115798	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh
Well #32	2014115799	NH3-N	58.6	ppm	10/09/14 20:54	Rugh
Well #38	2014115800	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh
Well #38duplicate	2014115801	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2014115802	pH	5.02		10/10/14 07:25	Kelly
Well #14	2014115803	pH	6.53		10/10/14 07:25	Kelly
Well #15	2014115804	pH	6.37		10/10/14 07:26	Kelly
Well #16	2014115805	pH	6.22		10/10/14 07:27	Kelly
Well #20	2014115806	pH	5.83		10/10/14 07:27	Kelly
Well #23R	2014115807	pH	5.35		10/10/14 07:28	Kelly
Well #24	2014115808	pH	5.48		10/10/14 07:28	Kelly
Well #26	2014115809	pH	5.76		10/10/14 07:29	Kelly
Well #27	2014115810	pH	6.57		10/10/14 07:30	Kelly
Well #33	2014115811	pH	5.62		10/10/14 07:30	Kelly
Well #39	2014115812	pH	5.35		10/10/14 07:31	Kelly
Well #41	2014115813	pH	5.61		10/10/14 07:31	Kelly
Well #43	2014115814	pH	5.41		10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	pH	5.31		10/10/14 07:33	Kelly
Well #47	2014115816	pH	6.22		10/10/14 07:33	Kelly
Well #48	2014115817	pH	5.66		10/10/14 07:34	Kelly
Well #RW2	2014115818	pH	4.43		10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	pH	5.06		10/10/14 07:35	Kelly
Well #17	2014115820	pH	6.18		10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2014115802	Cond	26.5	umho/cm	10/10/14 07:25	Kelly
Well #14	2014115803	Cond	454.0	umho/cm	10/10/14 07:26	Kelly
Well #15	2014115804	Cond	432.0	umho/cm	10/10/14 07:26	Kelly
Well #16	2014115805	Cond	336.0	umho/cm	10/10/14 07:27	Kelly
Well #20	2014115806	Cond	105.1	umho/cm	10/10/14 07:27	Kelly
Well #23R	2014115807	Cond	63.8	umho/cm	10/10/14 07:28	Kelly
Well #24	2014115808	Cond	61.3	umho/cm	10/10/14 07:29	Kelly
Well #26	2014115809	Cond	195.7	umho/cm	10/10/14 07:30	Kelly
Well #27	2014115810	Cond	381.0	umho/cm	10/10/14 07:30	Kelly
Well #33	2014115811	Cond	165.9	umho/cm	10/10/14 07:31	Kelly
Well #39	2014115812	Cond	1188.0	umho/cm	10/10/14 07:31	Kelly
Well #41	2014115813	Cond	592.0	umho/cm	10/10/14 07:32	Kelly
Well #43	2014115814	Cond	109.1	umho/cm	10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	Cond	101.3	umho/cm	10/10/14 07:33	Kelly
Well #47	2014115816	Cond	535.0	umho/cm	10/10/14 07:33	Kelly
Well #48	2014115817	Cond	128.6	umho/cm	10/10/14 07:34	Kelly
Well #RW2	2014115818	Cond	345.0	umho/cm	10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	Cond	26.5	umho/cm	10/10/14 07:35	Kelly
Well #17	2014115820	Cond	317.0	umho/cm	10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2014115802	F	<0.500	ppm	10/10/14 07:25	Kelly
Well #14	2014115803	F	<0.500	ppm	10/10/14 07:25	Kelly
Well #15	2014115804	F	2.17	ppm	10/10/14 07:26	Kelly
Well #16	2014115805	F	8.60	ppm	10/10/14 07:27	Kelly
Well #20	2014115806	F	<0.500	ppm	10/10/14 07:27	Kelly
Well #23R	2014115807	F	<0.500	ppm	10/10/14 07:28	Kelly
Well #24	2014115808	F	<0.500	ppm	10/10/14 07:29	Kelly
Well #26	2014115809	F	1.77	ppm	10/10/14 07:29	Kelly
Well #27	2014115810	F	6.55	ppm	10/10/14 07:30	Kelly
Well #33	2014115811	F	<0.500	ppm	10/10/14 07:30	Kelly
Well #39	2014115812	F	<0.500	ppm	10/10/14 07:31	Kelly
Well #41	2014115813	F	<0.500	ppm	10/10/14 07:31	Kelly
Well #43	2014115814	F	<0.500	ppm	10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	F	<0.500	ppm	10/10/14 07:33	Kelly
Well #47	2014115816	F	5.25	ppm	10/10/14 07:33	Kelly
Well #48	2014115817	F	<0.500	ppm	10/10/14 07:34	Kelly
Well #RW2	2014115818	F	<0.500	ppm	10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	F	<0.500	ppm	10/10/14 07:35	Kelly
Well #17	2014115820	F	1.74	ppm	10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2014115821	NH3-N	<1.00	ppm	10/09/14 20:55	Rugh
Well #14	2014115822	NH3-N	3.04	ppm	10/09/14 20:55	Rugh
Well #15	2014115823	NH3-N	13.1	ppm	10/09/14 20:55	Rugh
Well #16	2014115824	NH3-N	17.3	ppm	10/09/14 20:55	Rugh
Well #20	2014115825	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #23R	2014115826	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #24	2014115827	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #26	2014115828	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #27	2014115829	NH3-N	8.73	ppm	10/09/14 20:56	Rugh
Well #33	2014115830	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #39	2014115831	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #41	2014115832	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #43	2014115833	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115834	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #47	2014115835	NH3-N	18.6	ppm	10/09/14 20:57	Rugh
Well #48	2014115836	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #RW2	2014115837	NH3-N	<1.00	ppm	10/09/14 20:58	Rugh
Well #3Aduplicate	2014115838	NH3-N	<1.00	ppm	10/09/14 20:58	Rugh
Well #17	2014115839	NH3-N	4.87	ppm	10/09/14 20:58	Rugh

*NH3-N Sample Preservative:*

*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015009219	pH	6.99		01/25/15 17:24	Rugh
Well #10	2015009220	pH	5.24		01/25/15 17:25	Rugh
Well #13	2015009221	pH	6.52		01/25/15 17:26	Rugh
Well #18	2015009222	pH	7.32		01/25/15 17:26	Rugh
Well #22	2015009223	pH	4.90		01/25/15 17:27	Rugh
Well #28	2015009224	pH	6.03		01/25/15 17:28	Rugh
Well #29	2015009225	pH	7.14		01/25/15 17:28	Rugh
Well #30	2015009226	pH	6.53		01/25/15 17:29	Rugh
Well #32	2015009227	pH	7.08		01/25/15 17:29	Rugh
Well #38	2015009228	pH	5.34		01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015009219	Cond	2400.0	umho/cm	01/25/15 17:24	Rugh
Well #10	2015009220	Cond	822.0	umho/cm	01/25/15 17:25	Rugh
Well #13	2015009221	Cond	823.0	umho/cm	01/25/15 17:26	Rugh
Well #18	2015009222	Cond	5520.0	umho/cm	01/25/15 17:26	Rugh
Well #22	2015009223	Cond	907.0	umho/cm	01/25/15 17:27	Rugh
Well #28	2015009224	Cond	2270.0	umho/cm	01/25/15 17:28	Rugh
Well #29	2015009225	Cond	880.0	umho/cm	01/25/15 17:28	Rugh
Well #30	2015009226	Cond	928.0	umho/cm	01/25/15 17:29	Rugh
Well #32	2015009227	Cond	1504.0	umho/cm	01/25/15 17:29	Rugh
Well #38	2015009228	Cond	284.0	umho/cm	01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015009219	F	7.70	ppm	01/25/15 17:24	Rugh
Well #10	2015009220	F	3.65	ppm	01/25/15 17:25	Rugh
Well #13	2015009221	F	10.9	ppm	01/25/15 17:26	Rugh
Well #18	2015009222	F	6.55	ppm	01/25/15 17:26	Rugh
Well #22	2015009223	F	5.50	ppm	01/25/15 17:27	Rugh
Well #28	2015009224	F	5.35	ppm	01/25/15 17:28	Rugh
Well #29	2015009225	F	5.75	ppm	01/25/15 17:28	Rugh
Well #30	2015009226	F	11.3	ppm	01/25/15 17:29	Rugh
Well #32	2015009227	F	4.55	ppm	01/25/15 17:29	Rugh
Well #38	2015009228	F	<0.500	ppm	01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #7	2015009219	Cond_Dup RPD	2400.0 0.0	umho/cm %	01/25/15 17:24	Rugh
Well #28	2015009224	Cond_Dup RPD	2270.0 0.0	umho/cm %	01/25/15 17:28	Rugh
Well #29	2015009225	Cond_Dup RPD	881.0 0.1	umho/cm %	01/25/15 17:28	Rugh
Well #32	2015009227	Cond_Dup RPD	1506.0 0.1	umho/cm %	01/25/15 17:29	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009230</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015009230	NH3-N	54.4	ppm	01/25/15 17:48	Rugh
Well #10	2015009231	NH3-N	2.40	ppm	01/25/15 17:49	Rugh
Well #13	2015009232	NH3-N	44.0	ppm	01/25/15 17:49	Rugh
Well #18	2015009233	NH3-N	107	ppm	01/25/15 17:49	Rugh
Well #22	2015009234	NH3-N	26.1	ppm	01/25/15 17:49	Rugh
Well #28	2015009235	NH3-N	1.76	ppm	01/25/15 17:50	Rugh
Well #29	2015009236	NH3-N	16.0	ppm	01/25/15 17:50	Rugh
Well #30	2015009237	NH3-N	1.32	ppm	01/25/15 17:50	Rugh
Well #32	2015009238	NH3-N	54.4	ppm	01/25/15 17:50	Rugh
Well #38	2015009239	NH3-N	<1.00	ppm	01/25/15 17:51	Rugh

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015009241	pH	5.07		01/25/15 22:27	Rugh
Well #14	2015009242	pH	6.16		01/25/15 22:27	Rugh
Well #15	2015009243	pH	6.34		01/25/15 22:27	Rugh
Well #16	2015009244	pH	6.22		01/25/15 22:28	Rugh
Well #20	2015009245	pH	5.67		01/25/15 22:29	Rugh
Well #23	2015009246	pH	5.42		01/25/15 22:32	Rugh
Well #24	2015009247	pH	5.61		01/25/15 22:33	Rugh
Well #26	2015009248	pH	6.10		01/25/15 22:33	Rugh
Well #27	2015009249	pH	6.50		01/25/15 22:34	Rugh
Well #33	2015009250	pH	5.66		01/25/15 22:34	Rugh
Well #39	2015009251	pH	5.41		01/25/15 22:34	Rugh
Well #41	2015009252	pH	5.99		01/25/15 22:35	Rugh
Well #43	2015009253	pH	5.58		01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	pH	5.35		01/25/15 22:36	Rugh
Well #47	2015009255	pH	6.10		01/25/15 22:36	Rugh
Well #48	2015009256	pH	5.98		01/25/15 22:36	Rugh
Well #RW2	2015009257	pH	4.56		01/25/15 22:37	Rugh
Well #17	2015009258	pH	6.30		01/25/15 22:37	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2015009241	Cond	26.0	umho/cm	01/25/15 22:27	Rugh
Well #14	2015009242	Cond	103.8	umho/cm	01/25/15 22:27	Rugh
Well #15	2015009243	Cond	421.0	umho/cm	01/25/15 22:28	Rugh
Well #16	2015009244	Cond	319.0	umho/cm	01/25/15 22:28	Rugh
Well #20	2015009245	Cond	116.7	umho/cm	01/25/15 22:29	Rugh
Well #23	2015009246	Cond	62.7	umho/cm	01/25/15 22:33	Rugh
Well #24	2015009247	Cond	61.0	umho/cm	01/25/15 22:33	Rugh
Well #26	2015009248	Cond	195.7	umho/cm	01/25/15 22:33	Rugh
Well #27	2015009249	Cond	354.0	umho/cm	01/25/15 22:34	Rugh
Well #33	2015009250	Cond	154.4	umho/cm	01/25/15 22:34	Rugh
Well #39	2015009251	Cond	1129.0	umho/cm	01/25/15 22:35	Rugh
Well #41	2015009252	Cond	530.0	umho/cm	01/25/15 22:35	Rugh
Well #43	2015009253	Cond	109.1	umho/cm	01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	Cond	109.7	umho/cm	01/25/15 22:36	Rugh
Well #47	2015009255	Cond	537.0	umho/cm	01/25/15 22:36	Rugh
Well #48	2015009256	Cond	111.7	umho/cm	01/25/15 22:37	Rugh
Well #RW2	2015009257	Cond	318.0	umho/cm	01/25/15 22:37	Rugh
Well #17	2015009258	Cond	319.0	umho/cm	01/25/15 22:38	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015009241	F	<0.500	ppm	01/25/15 22:27	Rugh
Well #14	2015009242	F	<0.500	ppm	01/25/15 22:27	Rugh
Well #15	2015009243	F	2.22	ppm	01/25/15 22:27	Rugh
Well #16	2015009244	F	7.50	ppm	01/25/15 22:28	Rugh
Well #20	2015009245	F	<0.500	ppm	01/25/15 22:29	Rugh
Well #23	2015009246	F	<0.500	ppm	01/25/15 22:32	Rugh
Well #24	2015009247	F	<0.500	ppm	01/25/15 22:33	Rugh
Well #26	2015009248	F	1.83	ppm	01/25/15 22:33	Rugh
Well #27	2015009249	F	7.20	ppm	01/25/15 22:34	Rugh
Well #33	2015009250	F	<0.500	ppm	01/25/15 22:34	Rugh
Well #39	2015009251	F	<0.500	ppm	01/25/15 22:34	Rugh
Well #41	2015009252	F	<0.500	ppm	01/25/15 22:35	Rugh
Well #43	2015009253	F	<0.500	ppm	01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	F	<0.500	ppm	01/25/15 22:36	Rugh
Well #47	2015009255	F	4.92	ppm	01/25/15 22:36	Rugh
Well #48	2015009256	F	<0.500	ppm	01/25/15 22:37	Rugh
Well #RW2	2015009257	F	<0.500	ppm	01/25/15 22:37	Rugh
Well #17	2015009258	F	2.02	ppm	01/25/15 22:38	Rugh

### Cond\_Dup

Well #16	2015009244	Cond_Dup	320.0	umho/cm	01/25/15 22:28	Rugh
		RPD	0.3	%	01/25/15 22:28	
Well #39	2015009251	Cond_Dup	1128.0	umho/cm	01/25/15 22:35	Rugh
		RPD	0.1	%		
Well #47	2015009255	Cond_Dup	536.0	umho/cm	01/25/15 22:36	Rugh
		RPD	0.2	%		
Well #17	2015009258	Cond_Dup	320.0	umho/cm	01/25/15 22:38	Rugh
		RPD	0.3	%		

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015009259	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #14	2015009260	NH3-N	<1.00	ppm	01/22/15 22:51	Swafford
Well #15	2015009261	NH3-N	10.1	ppm	01/22/15 22:51	Swafford
Well #16	2015009262	NH3-N	12.6	ppm	01/22/15 22:52	Swafford
Well #20	2015009263	NH3-N	<1.00	ppm	01/22/15 22:48	Swafford
Well #23	2015009264	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #24	2015009265	NH3-N	<1.00	ppm	01/22/15 22:53	Swafford
Well #26	2015009266	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #27	2015009267	NH3-N	6.41	ppm	01/22/15 22:53	Swafford
Well #33	2015009268	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #39	2015009269	NH3-N	<1.00	ppm	01/22/15 22:48	Swafford
Well #41	2015009270	NH3-N	<1.00	ppm	01/22/15 22:51	Swafford
Well #43	2015009271	NH3-N	<1.00	ppm	01/22/15 22:52	Swafford

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009272	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #47	2015009273	NH3-N	18.3	ppm	01/25/15 17:55	Rugh
Well #48	2015009274	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #RW2	2015009275	NH3-N	<1.00	ppm	01/25/15 17:56	Rugh
Well #17	2015009276	NH3-N	5.89	ppm	01/25/15 17:56	Rugh

*NH3-N Sample Preservative:*

*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043880</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #RW2	2015043880	pH	4.60		04/11/15 07:02	Kelly
Well #41R	2015043881	pH	5.90		04/11/15 07:03	Kelly
Well #26	2015043882	pH	5.69		04/11/15 07:04	Kelly
Well #48	2015043883	pH	5.77		04/11/15 07:05	Kelly

### Specific Conductance at 25C

Well #RW2	2015043880	Cond	256.0	umho/cm	04/11/15 07:02	Kelly
Well #41R	2015043881	Cond	530.0	umho/cm	04/11/15 07:03	Kelly
Well #26	2015043882	Cond	176.2	umho/cm	04/11/15 07:04	Kelly
Well #48	2015043883	Cond	111.7	umho/cm	04/11/15 07:05	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:02

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043880</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #RW2	2015043880	F	<0.500	ppm	04/11/15 07:02	Kelly
Well #41R	2015043881	F	<0.500	ppm	04/11/15 07:03	Kelly
Well #26	2015043882	F	1.60	ppm	04/11/15 07:04	Kelly
Well #48	2015043883	F	<0.500	ppm	04/11/15 07:05	Kelly

### Cond\_Dup

Well #RW2	2015043880	Cond_Dup RPD	255.0 0.4	umho/cm %	04/11/15 07:02	Kelly
Well #41R	2015043881	Cond_Dup RPD	531.0 0.2	umho/cm %	04/11/15 07:03 04/11/15 07:03	Kelly
Well #26	2015043882	Cond_Dup RPD	177.0 0.5	umho/cm %	04/11/15 07:04	Kelly
Well #48	2015043883	Cond_Dup RPD	111.6 0.1	umho/cm %	04/11/15 07:05	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:02



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043891</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #RW2	2015043891	NH3-N	<1.00	ppm	04/11/15 07:38	Kelly
Well #41R	2015043892	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly
Well #26	2015043893	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly
Well #48	2015043894	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:03

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015045791	pH	6.84		04/18/15 12:56	Rugh
Well #10	2015045792	pH	5.55		04/18/15 12:57	Rugh
Well #13R	2015045793	pH	6.45		04/18/15 12:58	Rugh
Well #18	2015045794	pH	7.09		04/18/15 12:59	Rugh
Well #22	2015045795	pH	4.61		04/18/15 13:01	Rugh
Well #28	2015045796	pH	5.99		04/18/15 13:03	Rugh
Well #29	2015045797	pH	7.06		04/18/15 13:03	Rugh
Well #30	2015045798	pH	6.66		04/18/15 13:04	Rugh
Well #32	2015045799	pH	6.70		04/18/15 13:04	Rugh
Well #38	2015045800	pH	5.19		04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015045791	Cond	2730.0	umho/cm	04/18/15 12:56	Rugh
Well #10	2015045792	Cond	825.0	umho/cm	04/18/15 12:57	Rugh
Well #13R	2015045793	Cond	845.0	umho/cm	04/18/15 12:58	Rugh
Well #18	2015045794	Cond	5880.0	umho/cm	04/18/15 12:59	Rugh
Well #22	2015045795	Cond	992.0	umho/cm	04/18/15 13:01	Rugh
Well #28	2015045796	Cond	1998.0	umho/cm	04/18/15 13:03	Rugh
Well #29	2015045797	Cond	821.0	umho/cm	04/18/15 13:03	Rugh
Well #30	2015045798	Cond	685.0	umho/cm	04/18/15 13:04	Rugh
Well #32	2015045799	Cond	1606.0	umho/cm	04/18/15 13:04	Rugh
Well #38	2015045800	Cond	262.0	umho/cm	04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015045791	F	6.55	ppm	04/18/15 12:56	Rugh
Well #10	2015045792	F	2.68	ppm	04/18/15 12:57	Rugh
Well #13R	2015045793	F	10.7	ppm	04/18/15 12:58	Rugh
Well #18	2015045794	F	6.20	ppm	04/18/15 12:59	Rugh
Well #22	2015045795	F	6.25	ppm	04/18/15 13:01	Rugh
Well #28	2015045796	F	6.15	ppm	04/18/15 13:03	Rugh
Well #29	2015045797	F	6.30	ppm	04/18/15 13:03	Rugh
Well #30	2015045798	F	10.8	ppm	04/18/15 13:04	Rugh
Well #32	2015045799	F	5.00	ppm	04/18/15 13:04	Rugh
Well #38	2015045800	F	<0.500	ppm	04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #7	2015045791	Cond_Dup	2730.0	umho/cm	04/18/15 12:56	Rugh
		RPD	0.0	%		
Well #10	2015045792	Cond_Dup	825.0	umho/cm	04/18/15 12:57	Rugh
		RPD	0.0	%		
Well #18	2015045794	Cond_Dup	5880.0	umho/cm	04/18/15 12:59	Rugh
		RPD	0.0	%		
Well #29	2015045797	Cond_Dup	822.0	umho/cm	04/18/15 13:03	Rugh
		RPD	0.1	%		
Well #38	2015045800	Cond_Dup	260.0	umho/cm	04/18/15 13:05	Rugh
		RPD	0.8	%		

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045803</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015045803	NH3-N	56.1	ppm	04/14/15 12:25	Harvey
Well #10	2015045804	NH3-N	4.40	ppm	04/14/15 12:26	Harvey
Well #13R	2015045805	NH3-N	47.8	ppm	04/14/15 12:27	Harvey
Well #18	2015045806	NH3-N	99.6	ppm	04/14/15 12:27	Harvey
Well #22	2015045807	NH3-N	21.9	ppm	04/14/15 12:28	Harvey
Well #28	2015045808	NH3-N	1.11	ppm	04/14/15 12:30	Harvey
Well #29	2015045809	NH3-N	17.9	ppm	04/14/15 12:34	Harvey
Well #30	2015045810	NH3-N	<1.00	ppm	04/14/15 12:35	Harvey
Well #32	2015045811	NH3-N	48.0	ppm	04/14/15 12:35	Harvey
Well #38	2015045812	NH3-N	<1.00	ppm	04/14/15 12:36	Harvey

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: LHarvey

### Laboratory Approval

Horace Whitaker  
04/14/15 16:09

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #14	2015046277	pH	6.47		04/15/15 21:26	Penny
Well #15	2015046278	pH	6.33		04/15/15 21:27	Penny
Well #16	2015046279	pH	6.23		04/15/15 21:28	Penny
Well #17	2015046280	pH	6.29		04/15/15 21:31	Penny
Well #23R	2015046281	pH	5.51		04/15/15 21:31	Penny
Well #24	2015046282	pH	5.56		04/15/15 21:32	Penny
Well #33	2015046283	pH	5.66		04/15/15 21:32	Penny
Well #39	2015046284	pH	5.44		04/15/15 21:34	Penny
Well #43	2015046285	pH	5.44		04/15/15 21:36	Penny
Well #44	2015046286	pH	5.40		04/15/15 21:25	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/16/15 11:57

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #14	2015046277	Cond	260.0	umho/cm	04/15/15 21:26	Penny
Well #15	2015046278	Cond	432.0	umho/cm	04/15/15 21:27	Penny
Well #16	2015046279	Cond	325.0	umho/cm	04/15/15 21:29	Penny
Well #17	2015046280	Cond	311.0	umho/cm	04/15/15 21:31	Penny
Well #23R	2015046281	Cond	64.2	umho/cm	04/15/15 21:31	Penny
Well #24	2015046282	Cond	59.2	umho/cm	04/15/15 21:32	Penny
Well #33	2015046283	Cond	146.3	umho/cm	04/15/15 21:33	Penny
Well #39	2015046284	Cond	951.0	umho/cm	04/15/15 21:34	Penny
Well #43	2015046285	Cond	124.4	umho/cm	04/15/15 21:36	Penny
Well #44	2015046286	Cond	101.1	umho/cm	04/15/15 21:25	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/16/15 11:57



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #14	2015046277	F	<0.500	ppm	04/15/15 21:26	Penny
Well #15	2015046278	F	2.16	ppm	04/15/15 21:27	Penny
Well #16	2015046279	F	7.15	ppm	04/15/15 21:28	Penny
Well #17	2015046280	F	1.66	ppm	04/15/15 21:31	Penny
Well #23R	2015046281	F	<0.500	ppm	04/15/15 21:31	Penny
Well #24	2015046282	F	<0.500	ppm	04/15/15 21:32	Penny
Well #33	2015046283	F	<0.500	ppm	04/15/15 21:33	Penny
Well #39	2015046284	F	<0.500	ppm	04/15/15 21:34	Penny
Well #43	2015046285	F	<0.500	ppm	04/15/15 21:36	Penny
Well #44	2015046286	F	<0.500	ppm	04/15/15 21:25	Penny

### Cond\_Dup

Well #43	2015046285	Cond_Dup	123.4	umho/cm	04/16/15 17:12	Penny
		RPD	0.8	%	04/16/15 17:12	

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046294</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #14	2015046294	NH3-N	<1.00	ppm	04/14/15 20:23	Penny
Well #15	2015046295	NH3-N	6.35	ppm	04/14/15 20:23	Penny
Well #16	2015046296	NH3-N	10.2	ppm	04/14/15 20:25	Penny
Well #17	2015046297	NH3-N	3.72	ppm	04/14/15 20:25	Penny
Well #23R	2015046298	NH3-N	<1.00	ppm	04/14/15 20:25	Penny
Well #24	2015046299	NH3-N	<1.00	ppm	04/14/15 20:25	Penny
Well #33	2015046300	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #39	2015046301	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #43	2015046302	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #44	2015046303	NH3-N	<1.00	ppm	04/14/15 20:27	Penny

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 - 12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/15/15 12:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047334</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015047334	pH	5.07		04/17/15 20:15	Penny
Well #20	2015047335	pH	5.57		04/17/15 20:16	Penny
Well #27	2015047336	pH	6.46		04/17/15 20:17	Penny
Well #47	2015047337	pH	6.05		04/17/15 20:17	Penny

### Specific Conductance at 25C

Well #3A	2015047334	Cond	26.9	umho/cm	04/17/15 20:16	Penny
Well #20	2015047335	Cond	137.5	umho/cm	04/17/15 20:16	Penny
Well #27	2015047336	Cond	362.0	umho/cm	04/17/15 20:17	Penny
Well #47	2015047337	Cond	522.0	umho/cm	04/17/15 20:18	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 -11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047334</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015047334	F	<0.500	ppm	04/17/15 20:16	Penny
Well #20	2015047335	F	<0.500	ppm	04/17/15 20:16	Penny
Well #27	2015047336	F	7.15	ppm	04/17/15 20:17	Penny
Well #47	2015047337	F	5.20	ppm	04/17/15 20:17	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 -11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047352</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015047352	NH3-N	<1.00	ppm	04/17/15 20:13	Penny
Well #20	2015047353	NH3-N	<1.00	ppm	04/17/15 20:14	Penny
Well #27	2015047354	NH3-N	7.59	ppm	04/17/15 20:15	Penny
Well #47	2015047355	NH3-N	15.0	ppm	04/17/15 20:15	Penny

NH3-N Sample Preservative: H2SO4 FSC Lot#108088

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 - 11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015085726	pH	7.09		07/20/15 22:47	Rugh
Well #10	2015085727	pH	5.92		07/20/15 22:48	Rugh
Well #13R	2015085728	pH	6.59		07/20/15 22:50	Rugh
Well #17	2015085729	pH	6.29		07/20/15 22:51	Rugh
Well #18	2015085730	pH	7.23		07/20/15 22:53	Rugh
Well #22	2015085731	pH	5.49		07/20/15 22:55	Rugh
Well #28	2015085732	pH	6.15		07/20/15 22:55	Rugh
Well #29	2015085733	pH	7.32		07/20/15 22:56	Rugh
Well #30	2015085734	pH	6.73		07/20/15 22:56	Rugh
Well #32	2015085735	pH	7.04		07/20/15 22:57	Rugh
Well #38	2015085736	pH	5.22		07/20/15 22:57	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015085726	Cond	2970.0	umho/cm	07/20/15 22:48	Rugh
Well #10	2015085727	Cond	968.0	umho/cm	07/20/15 22:49	Rugh
Well #13R	2015085728	Cond	837.0	umho/cm	07/20/15 22:50	Rugh
Well #17	2015085729	Cond	311.0	umho/cm	07/20/15 22:52	Rugh
Well #18	2015085730	Cond	5930.0	umho/cm	07/20/15 22:54	Rugh
Well #22	2015085731	Cond	1333.0	umho/cm	07/20/15 22:55	Rugh
Well #28	2015085732	Cond	1709.0	umho/cm	07/20/15 22:56	Rugh
Well #29	2015085733	Cond	844.0	umho/cm	07/20/15 22:56	Rugh
Well #30	2015085734	Cond	862.0	umho/cm	07/20/15 22:57	Rugh
Well #32	2015085735	Cond	1815.0	umho/cm	07/20/15 22:57	Rugh
Well #38	2015085736	Cond	248.0	umho/cm	07/20/15 22:58	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015085726	F	7.30	ppm	07/20/15 22:47	Rugh
Well #10	2015085727	F	2.96	ppm	07/20/15 22:48	Rugh
Well #13R	2015085728	F	10.7	ppm	07/20/15 22:50	Rugh
Well #17	2015085729	F	1.98	ppm	07/20/15 22:52	Rugh
Well #18	2015085730	F	6.40	ppm	07/20/15 22:54	Rugh
Well #22	2015085731	F	6.60	ppm	07/20/15 22:55	Rugh
Well #28	2015085732	F	6.00	ppm	07/20/15 22:56	Rugh
Well #29	2015085733	F	6.95	ppm	07/20/15 22:56	Rugh
Well #30	2015085734	F	9.65	ppm	07/20/15 22:56	Rugh
Well #32	2015085735	F	4.66	ppm	07/20/15 22:57	Rugh
Well #38	2015085736	F	<0.500	ppm	07/20/15 22:58	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #18	2015085730	Cond_Dup	5920.0	umho/cm	07/20/15 22:55	Rugh
		RPD	0.2	%		
Well #38	2015085736	Cond_Dup	249.0	umho/cm	07/20/15 22:58	Rugh
		RPD	0.4	%		

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085739</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015085739	NH3-N	57.1	ppm	07/19/15 11:55	Harvey
Well #10	2015085740	NH3-N	8.59	ppm	07/19/15 11:56	Harvey
Well #13	2015085741	NH3-N	49.1	ppm	07/19/15 11:56	Harvey
Well #17	2015085742	NH3-N	6.14	ppm	07/19/15 11:57	Harvey
Well #18	2015085743	NH3-N	126	ppm	07/19/15 11:58	Harvey
Well #22	2015085744	NH3-N	63.1	ppm	07/19/15 11:59	Harvey
Well #28	2015085745	NH3-N	1.10	ppm	07/19/15 12:00	Harvey
Well #29	2015085746	NH3-N	25.2	ppm	07/19/15 12:01	Harvey
Well #30	2015085747	NH3-N	1.29	ppm	07/19/15 12:02	Harvey
Well #32	2015085748	NH3-N	75.1	ppm	07/19/15 12:03	Harvey
Well #38	2015085749	NH3-N	<1.00	ppm	07/19/15 12:04	Harvey

NH3-N Sample Preservative: H2SO4 FSC Lot#108088

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: LHarvey

### Laboratory Approval

Horace Whitaker  
07/20/15 11:31

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
------------	----------	------------	---------	-------	--------------	---------

*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015085750	pH	5.06		07/20/15 23:03	Rugh
Well #14	2015085751	pH	6.66		07/20/15 23:04	Rugh
Well #15	2015085752	pH	6.57		07/20/15 23:05	Rugh
Well #16	2015085753	pH	6.25		07/20/15 23:06	Rugh
Well #20	2015085754	pH	5.68		07/20/15 23:12	Rugh
Well #23	2015085755	pH	5.75		07/20/15 23:13	Rugh
Well #24	2015085756	pH	5.72		07/20/15 23:13	Rugh
Well #26	2015085757	pH	6.00		07/20/15 23:21	Rugh
Well #27	2015085758	pH	6.45		07/20/15 23:21	Rugh
Well #33	2015085759	pH	5.85		07/20/15 23:23	Rugh
Well #39	2015085760	pH	5.48		07/20/15 23:24	Rugh
Well #41	2015085761	pH	5.95		07/20/15 23:24	Rugh
Well #43	2015085762	pH	5.60		07/20/15 23:24	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	pH	5.65		07/20/15 23:25	Rugh
Well #47	2015085764	pH	6.10		07/20/15 23:26	Rugh
Well #48	2015085765	pH	5.87		07/20/15 23:26	Rugh
Well #RW2	2015085766	pH	4.69		07/20/15 23:02	Rugh

*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2015085750	Cond	26.1	umho/cm	07/20/15 23:03	Rugh
Well #14	2015085751	Cond	396.0	umho/cm	07/20/15 23:04	Rugh
Well #15	2015085752	Cond	437.0	umho/cm	07/20/15 23:05	Rugh
Well #16	2015085753	Cond	301.0	umho/cm	07/20/15 23:06	Rugh
Well #20	2015085754	Cond	127.4	umho/cm	07/20/15 23:12	Rugh
Well #23	2015085755	Cond	64.9	umho/cm	07/20/15 23:13	Rugh
Well #24	2015085756	Cond	58.5	umho/cm	07/20/15 23:13	Rugh
Well #26	2015085757	Cond	200.0	umho/cm	07/20/15 23:21	Rugh
Well #27	2015085758	Cond	349.0	umho/cm	07/20/15 23:22	Rugh
Well #33	2015085759	Cond	144.8	umho/cm	07/20/15 23:23	Rugh
Well #39	2015085760	Cond	779.0	umho/cm	07/20/15 23:24	Rugh
Well #41	2015085761	Cond	552.0	umho/cm	07/20/15 23:24	Rugh
Well #43	2015085762	Cond	114.2	umho/cm	07/20/15 23:25	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	Cond	96.2	umho/cm	07/20/15 23:25	Rugh
Well #47	2015085764	Cond	586.0	umho/cm	07/20/15 23:26	Rugh
Well #48	2015085765	Cond	119.6	umho/cm	07/20/15 23:27	Rugh
Well #RW2	2015085766	Cond	264.0	umho/cm	07/20/15 23:02	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015085750	F	<0.500	ppm	07/20/15 23:03	Rugh
Well #14	2015085751	F	<0.500	ppm	07/20/15 23:04	Rugh
Well #15	2015085752	F	2.40	ppm	07/20/15 23:05	Rugh
Well #16	2015085753	F	9.55	ppm	07/20/15 23:06	Rugh
Well #20	2015085754	F	<0.500	ppm	07/20/15 23:12	Rugh
Well #23	2015085755	F	<0.500	ppm	07/20/15 23:13	Rugh
Well #24	2015085756	F	<0.500	ppm	07/20/15 23:13	Rugh
Well #26	2015085757	F	1.82	ppm	07/20/15 23:21	Rugh
Well #27	2015085758	F	7.05	ppm	07/20/15 23:21	Rugh
Well #33	2015085759	F	<0.500	ppm	07/20/15 23:23	Rugh
Well #39	2015085760	F	<0.500	ppm	07/20/15 23:24	Rugh
Well #41	2015085761	F	<0.500	ppm	07/20/15 23:24	Rugh
Well #43	2015085762	F	<0.500	ppm	07/20/15 23:25	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	F	<0.500	ppm	07/20/15 23:25	Rugh
Well #47	2015085764	F	5.35	ppm	07/20/15 23:26	Rugh
Well #48	2015085765	F	<0.500	ppm	07/20/15 23:26	Rugh
Well #RW2	2015085766	F	<0.500	ppm	07/20/15 23:02	Rugh

### Cond\_Dup

Well #44	2015085763	Cond_Dup RPD	96.5 0.3	umho/cm %	07/20/15 23:26	Rugh
Well #RW2	2015085766	Cond_Dup RPD	266.0 0.8	umho/cm %	07/20/15 23:28	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015085773	NH3-N	<1.00	ppm	07/19/15 05:28	Swafford
Well #14	2015085774	NH3-N	2.77	ppm	07/19/15 05:28	Swafford
Well #15	2015085775	NH3-N	12.6	ppm	07/19/15 05:28	Swafford
Well #16	2015085776	NH3-N	16.2	ppm	07/19/15 05:29	Swafford
Well #20	2015085777	NH3-N	<1.00	ppm	07/19/15 05:29	Swafford
Well #23	2015085778	NH3-N	<1.00	ppm	07/19/15 05:29	Swafford
Well #24	2015085779	NH3-N	<1.00	ppm	07/19/15 05:30	Swafford
Well #26	2015085780	NH3-N	<1.00	ppm	07/19/15 05:31	Swafford
Well #27	2015085781	NH3-N	7.88	ppm	07/19/15 05:32	Swafford
Well #33	2015085782	NH3-N	<1.00	ppm	07/19/15 05:32	Swafford
Well #39	2015085783	NH3-N	<1.00	ppm	07/19/15 05:32	Swafford
Well #41	2015085784	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford
Well #43	2015085785	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085786	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford
Well #47	2015085787	NH3-N	18.9	ppm	07/19/15 05:34	Swafford
Well #48	2015085788	NH3-N	<1.00	ppm	07/19/15 05:34	Swafford
Well #RW2	2015085789	NH3-N	<1.00	ppm	07/19/15 05:34	Swafford
NH3-N Sample Preservative: H2SO4 FSC Lot#108088						

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

**Enclosure h)**

**Westinghouse Electric Company  
In-Field Elevation and Depth to Groundwater Forms**

# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Oct

Year: 2014

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	8.6	12.7				
WELL	7	2.0	12.3	16.1				
WELL	10	-.5	16.7	20.7				
WELL	13R	-.7	13.1	13.6				
WELL	14	1.4	17.8	18.3				
WELL	15	1.2	12.9	14.5				
WELL	16	-.7	4.1	11.1				
WELL	17	1.6	14.9	17.8				
WELL	18	-.4	12.4	21.4				
WELL	20	2.7	10.4	10.4				
WELL	22	-.6	11.8	13.4				
WELL	23R	3.0	19.7	21.6				
WELL	24	2.0	13.3	13.5				
WELL	26	1.5	26.2	*				
WELL	27	1.6	10.9	15.2				
WELL	28	1.8	12.6	13.6				
WELL	29	1.5	12.3	12.3				
WELL	30	1.8	12.7	12.9				
WELL	32	2.0	19.7	21.3				
WELL	33	1.1	16.1	17.1				
WELL	38	-.7	10.0	11.5				
WELL	39	2.7	16.6	16.8				
WELL	41R	2.6	15.9	*				
WELL	43	2.9	16.2	16.6				
WELL	44	3.0	19.2	19.7				

Technician: R. Crews

Date Sampled: 10/6,7&8/2014

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Oct

Year: 2014[illegible]

Technician: **R. Crews**

Date Sampled: **10/6,7,&8/2014**

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Jan

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	6.7	11.3				
WELL	7	2.0	11.7	16.2				
WELL	10	-.5	16.6	20.5				
WELL	13R	-.7	12.7	13.3				
WELL	14	1.4	16.9	17.5				
WELL	15	1.2	12.4	14.4				
WELL	16	-.7	4.1	11.2				
WELL	17	1.6	14.6	17.5				
WELL	18	-.4	11.9	22.7				
WELL	20	2.7	7.6	7.6				
WELL	22	-.6	10.8	12.9				
WELL	23R	3.0	19.9	21.5				
WELL	24	2.0	13.3	13.5				
WELL	26	1.5	26.2	*				
WELL	27	1.6	10.2	15.0				
WELL	28	1.8	12.5	13.1				
WELL	29	1.5	12.1	12.3				
WELL	30	1.8	12.5	12.7				
WELL	32	2.0	19.2	19.7				
WELL	33	1.1	16.0	16.8				
WELL	38	-.7	9.8	11.4				
WELL	39	2.7	16.3	16.6				
WELL	41R	2.6	15.8	*				
WELL	43	2.9	14.6	15.0				
WELL	44	3.0	19.1	19.9				

Technician: R. Crews

Date Sampled: 1/12,19,20&21/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor



FORM NO.:	ROF-06-007-2
REVISION:	5
PAGE:	1 OF 1
EFFECTIVE DATE:	06/05/07

Year: **2015**[illegible]Date Sampled: 1/12,19,20&21/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: April

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	5.9	10.0				
WELL	7	2.0	11.3	16.4				
WELL	10	-.5	15.7	20.6				
WELL	13R	-.7	11.6	12.2				
WELL	14	1.4	16.2	16.7				
WELL	15	1.2	11.9	14.1				
WELL	16	-.7	3.4	11.0				
WELL	17	1.6	14.2	17.3				
WELL	18	-.4	11.5	23.0				
WELL	20	2.7	7.2	7.5				
WELL	22	-.6	10.3	12.7				
WELL	23R	3.0	18.9	21.4				
WELL	24	2.0	9.1	9.3				
WELL	26	1.5	26.3	*				
WELL	27	1.6	10.0	14.8				
WELL	28	1.8	11.8	12.3				
WELL	29	1.5	11.4	11.5				
WELL	30	1.8	11.8	12.0				
WELL	32	2.0	18.7	21.3				
WELL	33	1.1	15.5	16.5				
WELL	38	-.7	9.1	10.7				
WELL	39	2.7	15.7	16.0				
WELL	41R	2.6	15.6	*				
WELL	43	2.9	14.3	14.8				
WELL	44	3.0	18.7	19.4				

Technician: R. Crews

Date Sampled: 4/9,13,14&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: April Year: 2015

[illegible]

Technician: **R. Crews**

Date Sampled: 4/9,13,14&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: July

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	7.9	11.1				
WELL	7	2.0	11.7	17.4				
WELL	10	-.5	16.2	20.7				
WELL	13R	-.7	12.1	12.7				
WELL	14	1.4	17.0	17.5				
WELL	15	1.2	12.6	14.5				
WELL	16	-.7	3.9	11.0				
WELL	17	1.6	14.4	17.1				
WELL	18	-.4	11.7	23.0				
WELL	20	2.7	9.9	10.0				
WELL	22	-.6	10.7	12.6				
WELL	23R	3.0	19.1	20.8				
WELL	24	2.0	11.4	11.6				
WELL	26	1.5	25.7	*				
WELL	27	1.6	11.0	14.9				
WELL	28	1.8	11.8	12.3				
WELL	29	1.5	11.5	11.5				
WELL	30	1.8	11.8	11.9				
WELL	32	2.0	19.1	20.8				
WELL	33	1.1	15.7	16.5				
WELL	38	-.7	9.3	9.3				
WELL	39	2.7	16.1	16.2				
WELL	41R	2.6	15.5	*				
WELL	43	2.9	15.4	15.8				
WELL	44	3.0	18.9	19.6				

Technician: R. Crews

Date Sampled: 7/10,13,15&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: July

Year: 2015[illegible]

Technician: **R. Crews**

Date Sampled: 7/10,13,15&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

**Enclosure i)**

**Isoconcentration Maps for Parameters Monitored for  
Groundwater MCL Exceedences**

**Fluoride**

**Nitrate**

**Gross Alpha**

**Gross Beta**

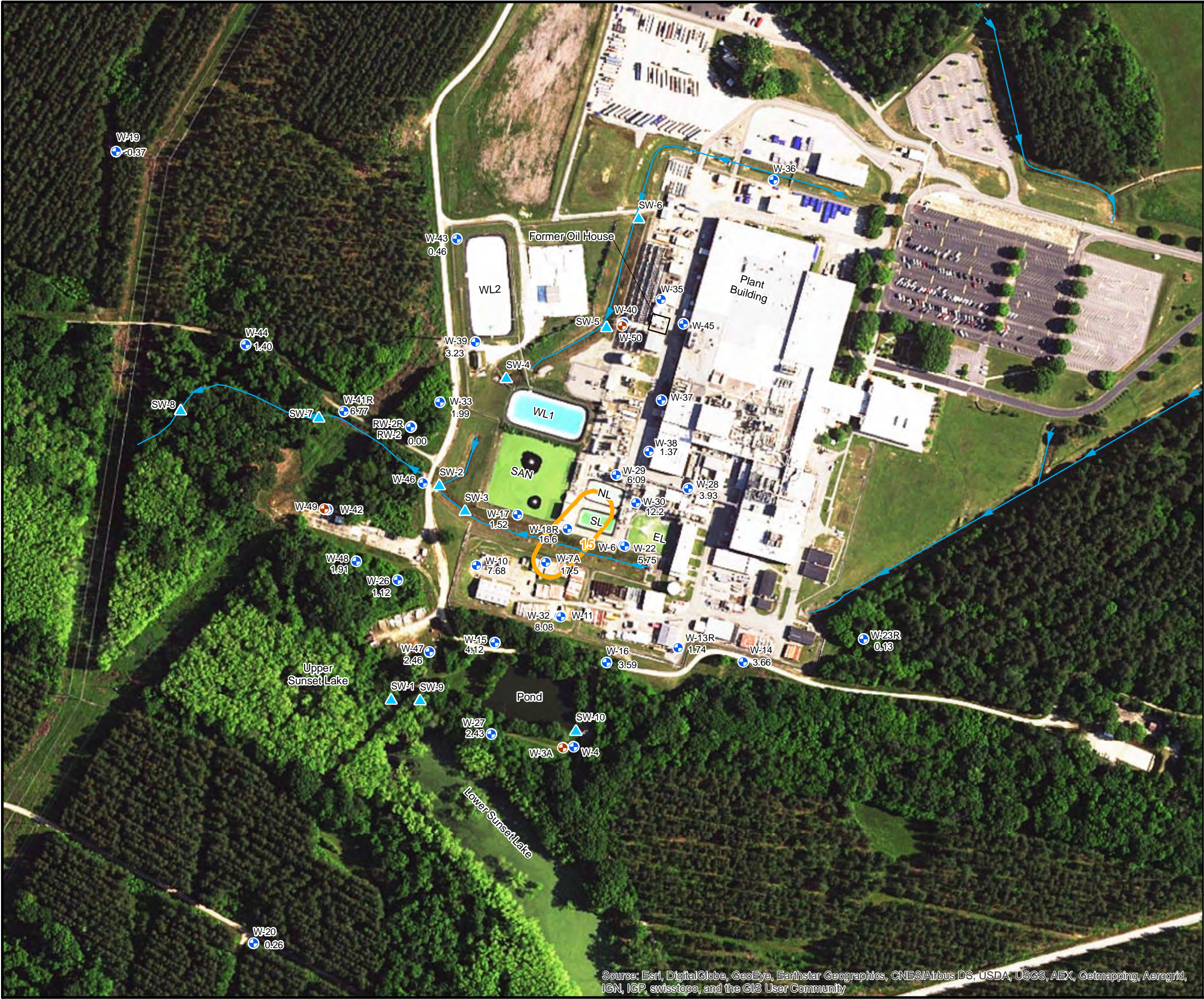












**Legend**

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- 6.09 Gross Alpha Concentration (pCi/L)
- Gross Alpha Isoconcentration (pCi/L)
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2

300 150 0 300 Feet  
1:3,600

Map Projection: NAD 1983, South Carolina State Plane, FIPS 3900, Feet  
Datum: North American 1983



101 Research Drive  
Columbia, SC 29203  
T: (803) 254-4400 F: (803) 771-6676

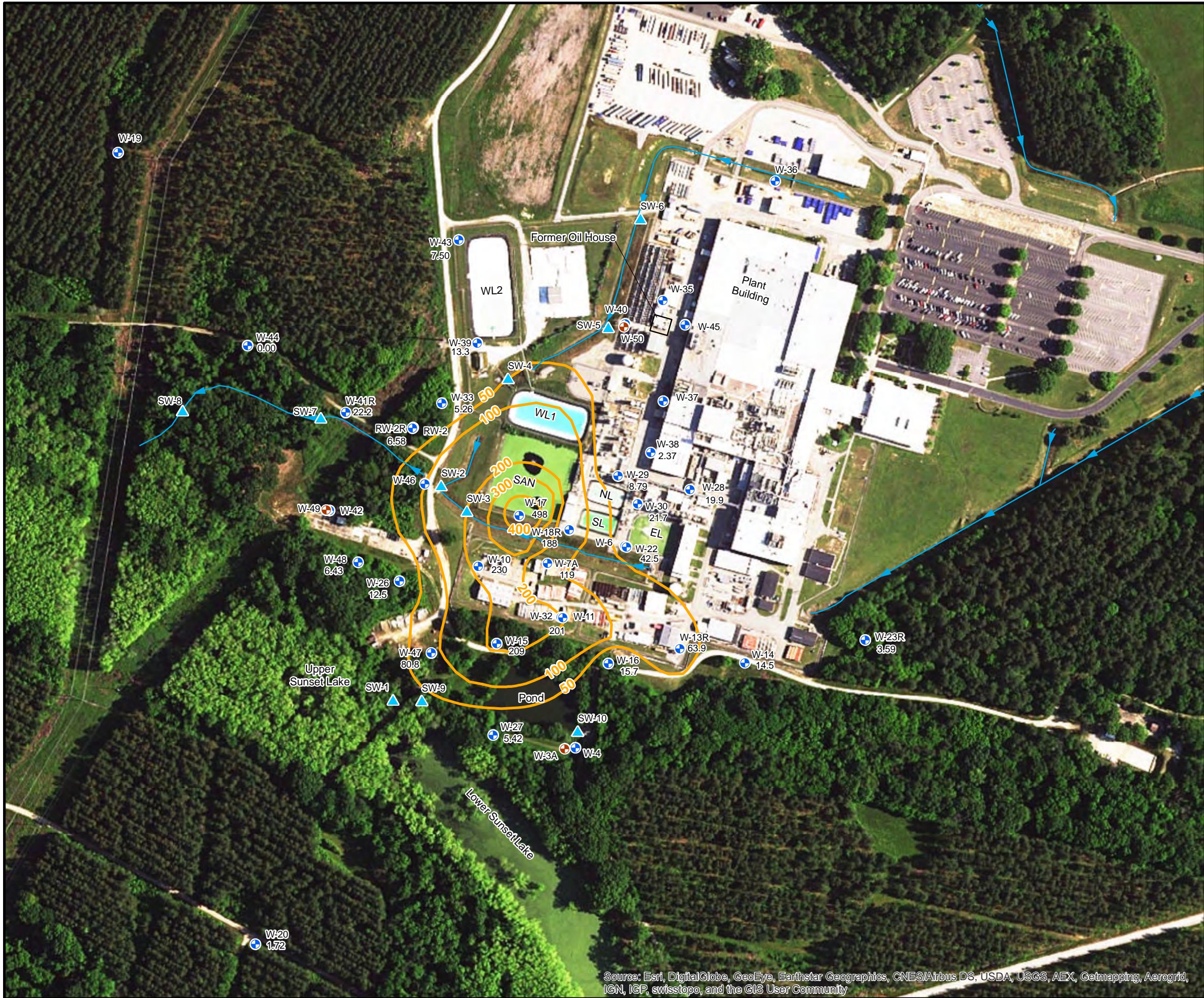
**GROSS ALPHA IN GROUNDWATER  
JULY 2015**

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA






PROJECT NO. 60476411	PREPARED BY: KPM	DATE: December 2015	<b>FIGURE I3</b>
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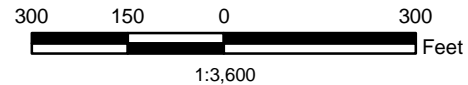
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community





**Legend**

-  Shallow Aquifer Monitoring Well Location
-  Black Mingo Aquifer Monitoring Well Location
-  Surface Water/Sediment Sampling Locations
-  Ditch
- 8.79 Gross Beta Concentration (pCi/L)
-  Gross Beta Isoconcentration Contour (pCi/L)
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2



Map Projection: NAD 1983, South Carolina State Plane,  
FIPS 3900, Feet  
Datum: North American 1983



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**GROSS BETA IN GROUNDWATER  
JULY 2015**

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411	PREPARED BY: KPM	DATE: December 2015	<b>FIGURE I4</b>
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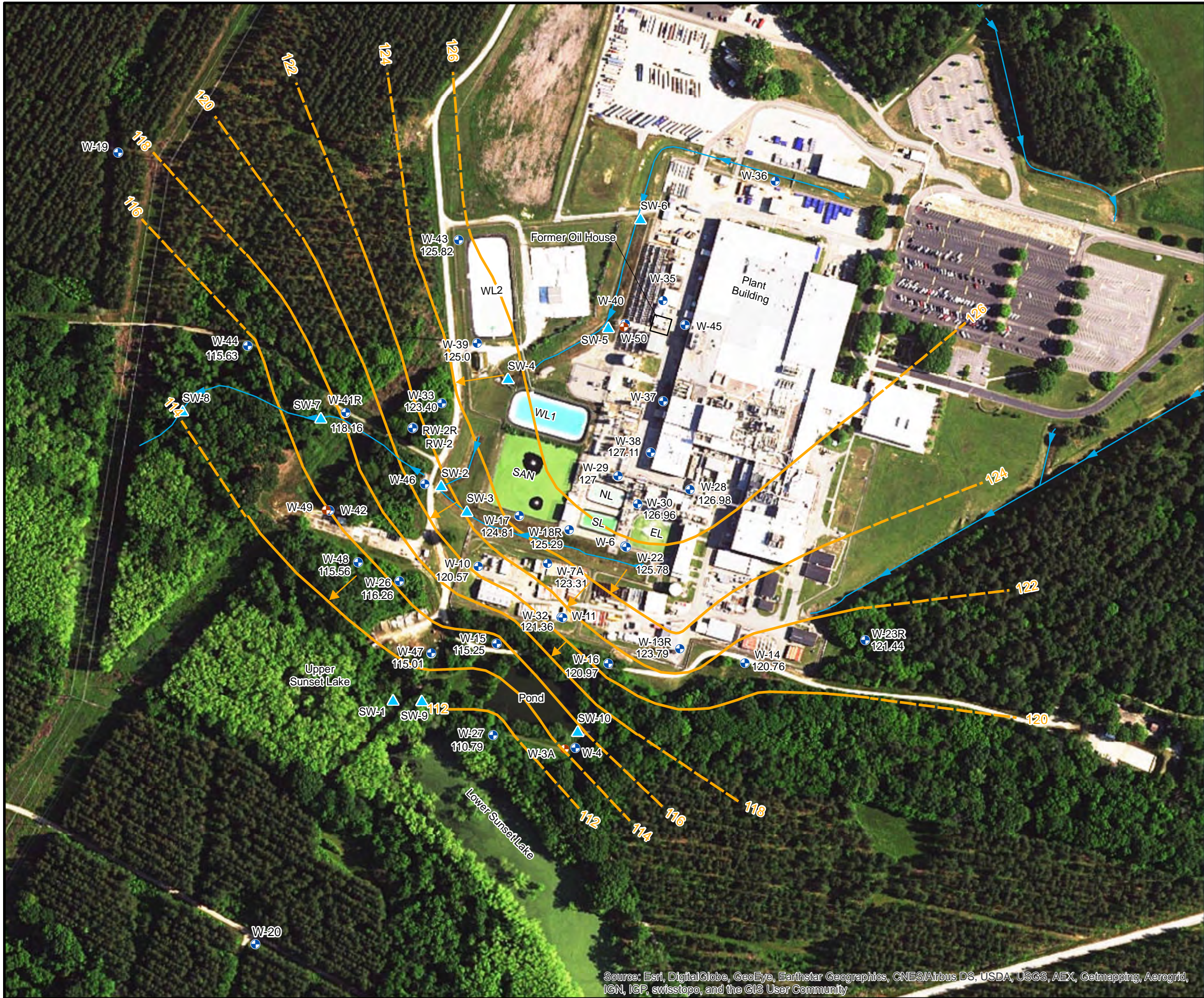
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid,  
IGN, IGP, swisstopo, and the GIS User Community



**Enclosure j)**

**Water Table Surface Map Using Shallow Aquifer Water Level  
Elevations, AECOM**





**Legend**

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- Water Table Surface Contours
- 120.79 Water Level Elevation (Ft msl) on June 6, 2013
- Inferred Groundwater Flow Direction
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2

300 150 0 300  
Feet  
1:3,600

Map Projection: NAD 1983, South Carolina State Plane,  
FIPS 3900, Feet  
Datum: North American 1983

**AECOM**

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**WATER TABLE SURFACE MAP**  
July, 2015

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411	PREPARED BY: KPM	DATE: December 2015	<b>FIGURE J1</b>
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid,  
IGN, IGP, swisstopo, and the GIS User Community



**Enclosure k)**

**Contaminant Trend Graphs, AECOM**

Figure K1 - Fluoride Concentration Trends

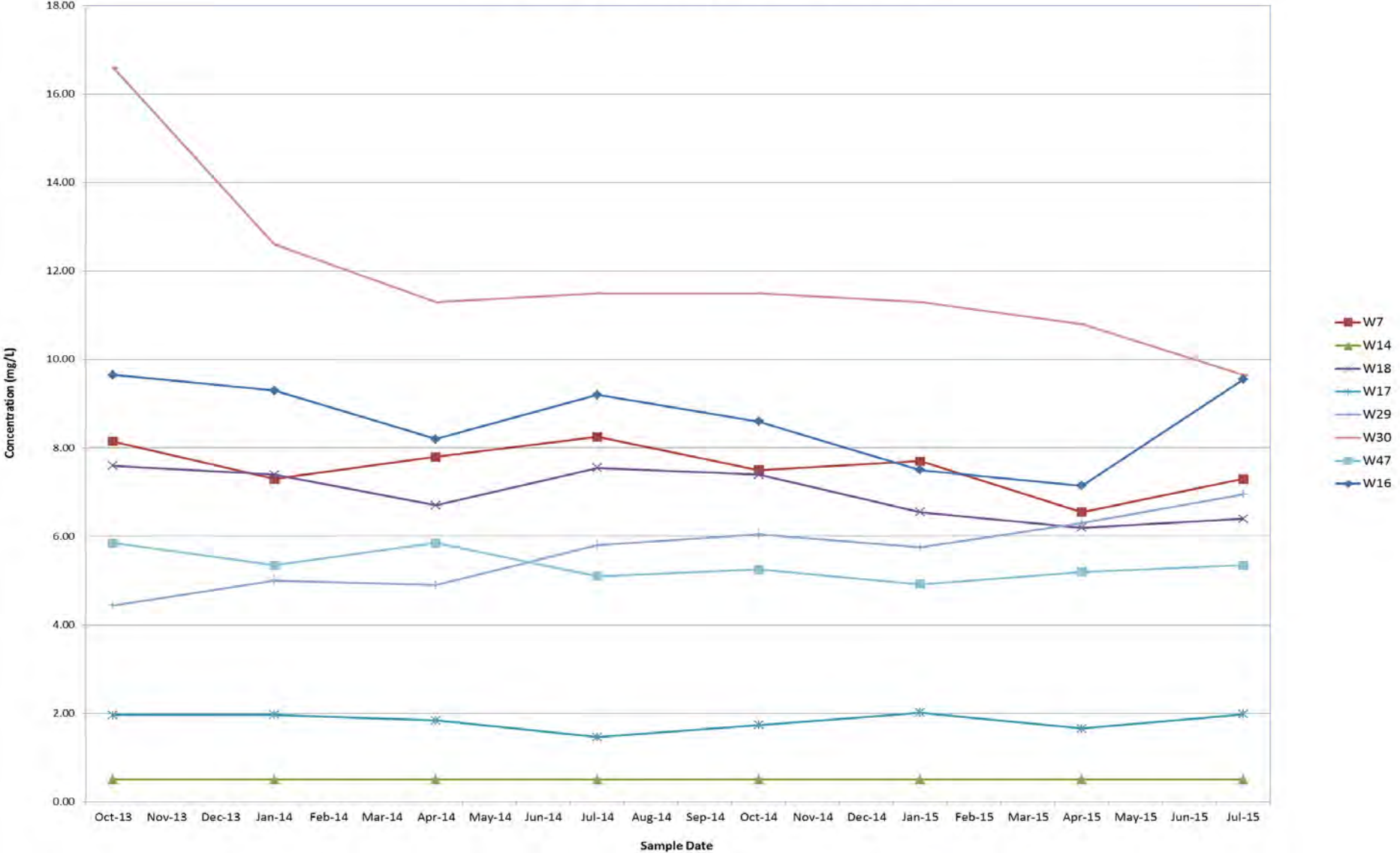


Figure K2- Nitrate Concentration Trends

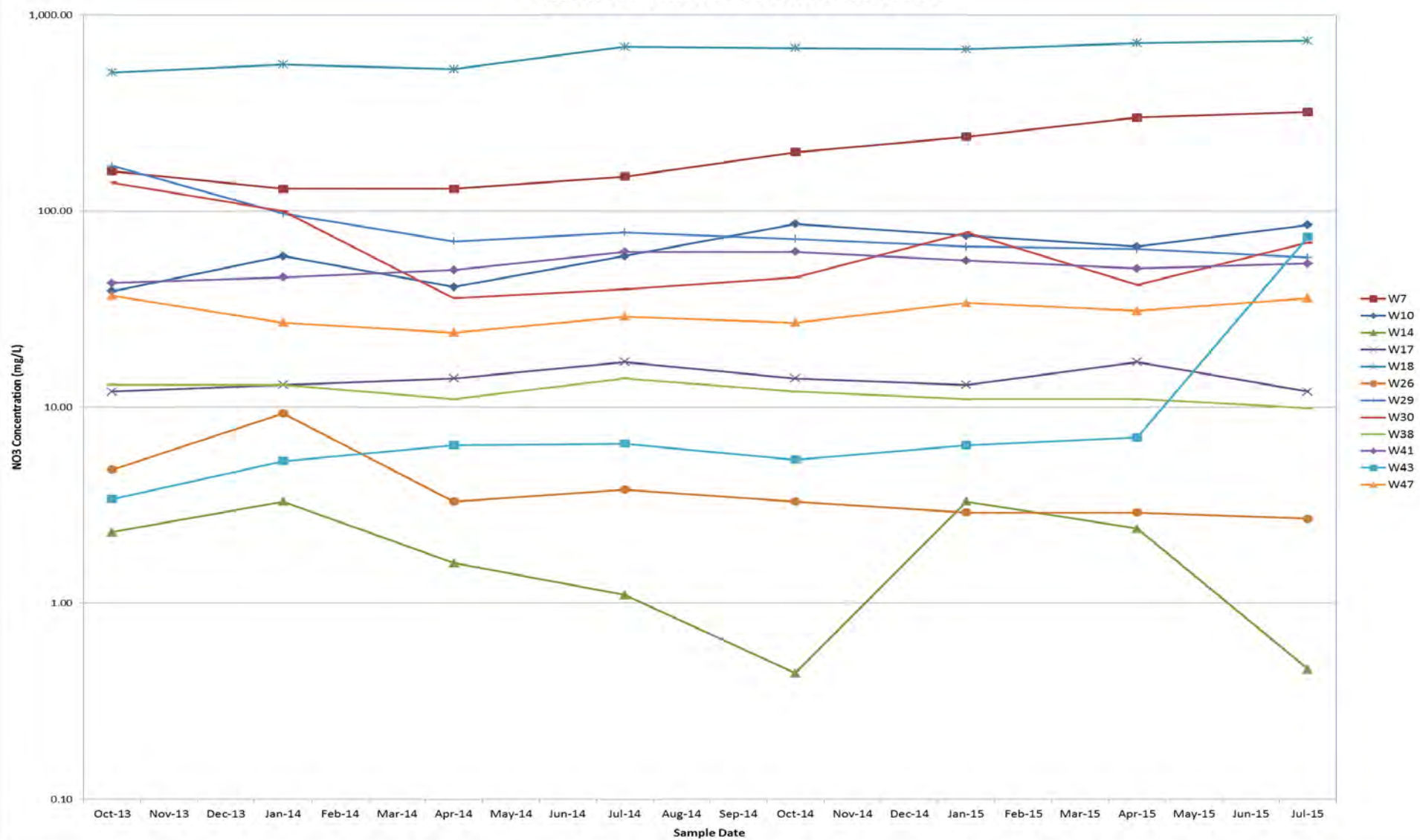


Figure K3 - Gross Alpha Concentration Trends

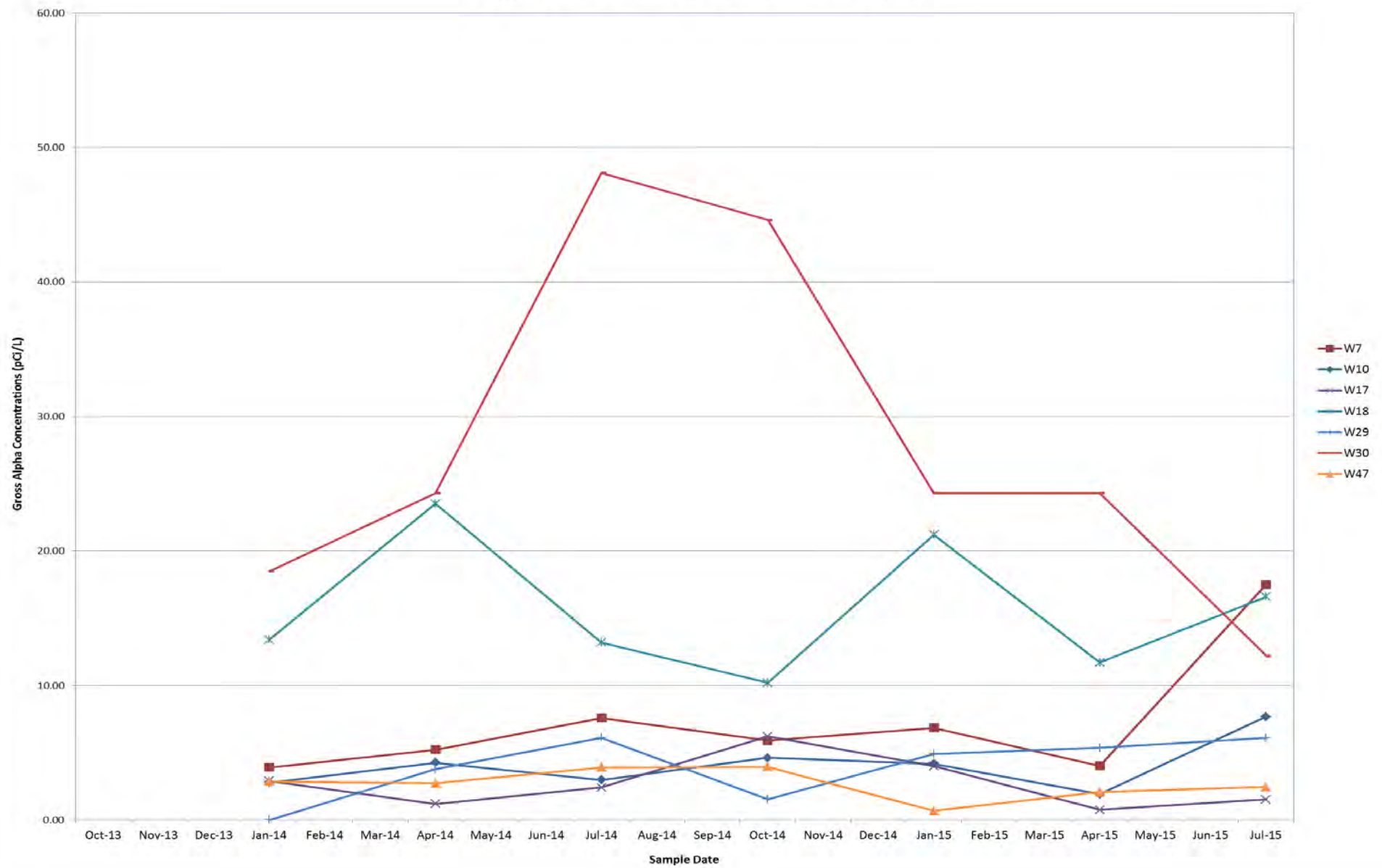
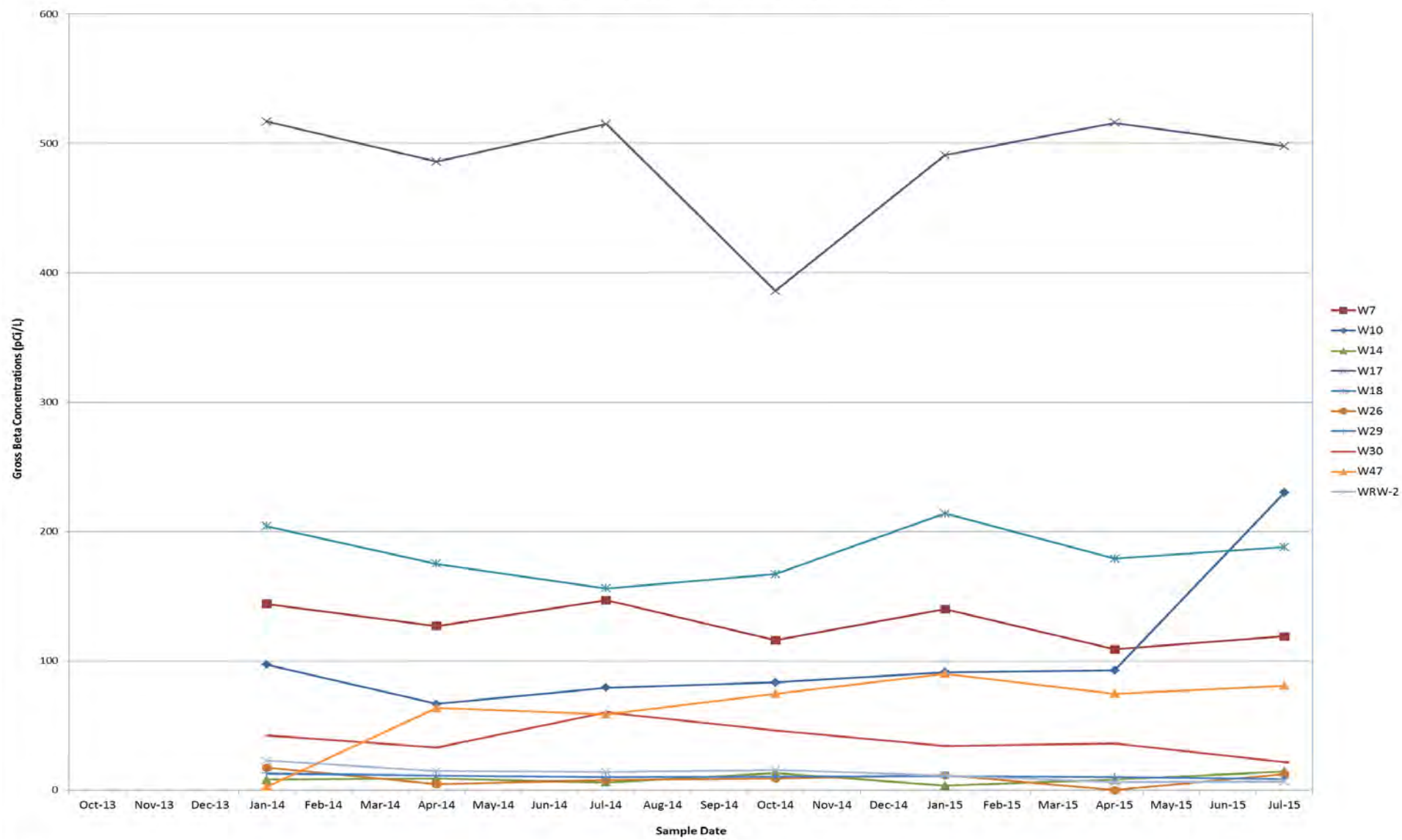




Figure K4 - Gross Beta Concentration Trends



**Enclosure I)**

**Discussion of the Water Quality Trends Over the Last Two  
Years, AECOM**

## **Groundwater Trend Discussion**

Groundwater quality data for the last two years was used to create time-series trend plots for select monitoring wells for fluoride, nitrate, gross alpha, and gross beta (Figures K1 through K4). For each compound, monitoring wells were selected for analysis by including wells that are within the plume and along the edges of the plume. A discussion of the trend plots is included below.

Figure K1 illustrates fluoride concentration trends for eight wells. Fluoride concentrations in well W30 decreased over the last two years. Fluoride concentrations in the remaining wells remained stable and within historic ranges.

Figure K2 illustrates nitrate concentration trends for 12 wells. Nitrate concentrations increased and remained near historic highs in wells W7, W10, W18, and W43. Nitrate decreased or remained stable in the remaining wells and remained within historic ranges.

Figure K3 illustrates gross alpha concentration trends for seven wells. Gross alpha concentrations were generally elevated in samples from wells W18 and W30. Gross alpha increased in well W30 in July 2014, remained elevated in October 2014, and then decreased in between January 2015 and July 2015. Gross alpha remained slightly elevated in well W18. Gross alpha increased in well W7 in July 2015. Gross alpha remained relatively low in wells W10, W17, W29, and W47. Gross alpha remained within historic ranges in all monitoring wells.

Figure K4 illustrates gross beta concentration trends for 10 wells. Gross beta remained elevated and at the highest historical concentrations in well W17. Gross beta concentrations remained elevated but within historical ranges in samples from wells W7, W10, W18, and W47. Gross beta remained low and within historic ranges in wells W14, W26, W29, W30, and WRW2.

**Enclosure m)**

**PG Signature, AECOM**

## Professional Geologist Certification

"I certify that I am a qualified groundwater scientist who has received a baccalaureate degree in geology and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by South Carolina registration and completion of accredited university courses that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that I have technically reviewed this report."

By: Charles K. Suddeth  
Charles K. Suddeth, P.G.  
Registered Professional Geologist  
South Carolina P.G. No.: 969

Date: December 29, 2015



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SC Dept. of Health & Environmental Control  
 Bureau of Water/Water Monitoring, Assessment  
 and Protection Division  
 Groundwater Quality Section  
 2600 Bull Street  
 Columbia, South Carolina 29201

Direct tel: 803-647-3171  
 Direct fax: 803-695-3964  
 e-mail: logsdocj@westinghouse.com

Your ref: **Site ID # 00456**  
 Our ref: LTR-RAC-14-46

Subject: NPDES Permit #SC0001848  
 Ground Water Sampling, October 2013 through July 2014,  
 Annual Report

Date: September 26, 2014

Dear Sir or Madame:

Enclosed are results from the groundwater sampling survey completed during January 2014 and July 2014, as requested by the Bureau of Water via NPDES permit #SC0001848. In this report, we are sharing October 2013 and April 2014 results as well as the required Winter and Summer 2014 results. Westinghouse is not required to sample groundwater quarterly, but we do so in order to have the benefit of more data points.

NPDES required wells W-26, W-41, W-48, and RW-2 were sampled on October 14, 2013, January 13, 2014, April 4, 2014, and on July 14, 2014, for volatile and semi-volatile organic compounds by Shealy Environmental Services, by purging three casing volumes using a Teflon bailer, then taking four readings to ensure parameter stabilization prior to sampling using a Grundfos pump. VOC results with the associated field data sheets are attached. The table below represents the only detected results.

Well	Tetrachloroethene ug/L				Trichloroethene ug/L			
	Oct-13	Jan-14	Apr-14	Jul-14	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	130.0	140.0	110.0	120.0	12.0	9.9	8.4	5.7
W26	<1	<1	<1	<1	<1	<1	<1	<1
W41	160.0	200.0	170.0	150.0	22.0	34.0	23	22
W48	160.0	170.0	140.0	140.0	2.8	2.9	2.9	<1

Well	cis-1,2-Dichloroethene ug/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<1	<1	<1	<1
W26	1.70	1.00	<1	<1
W41	<1	1.20	<1	<1
W48	5	5.30	5.20	5.20

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The Westinghouse technician sampled the remaining NPDES required wells, during October 2013, January, April, and July 2014, by purging three casing volumes using a Teflon bailer, then sampling by also using the dedicated bailer. Analyses for ammonia, fluoride, pH and conductivity are completed by the Westinghouse chemical laboratory, while the Nitrate parameter is analyzed by Shealy Environmental Services. See the tables below for results.

	<b>Depth to Water pre-baling (feet)</b>			
<b>Well</b>	<b>Oct-13</b>	<b>Jan-14</b>	<b>Apr-14</b>	<b>Jul-14</b>
WRW-2	18.1	18.2	18.1	18.1
W7	11.9	11.3	11.4	11.7
W10	15.9	16.2	15.8	16.3
W13R	12.3	12.2	11.7	12.2
W15	12.0	12	11.9	12.5
W16	3.9	3.7	3.3	3.6
W18	11.9	11.3	11.6	11.8
W22	11.2	10	10.5	10.9
W24	10.9	10.9	9.1	11.6
W26	25.2	25.8	24.9	25.7
W29	11.6	11.8	11.5	11.7
W30	12.0	12.1	11.8	12
W32	19.1	19	18.7	19.1
W33	15.7	15.8	15.6	15.8
W39	16.1	16.1	15.9	16.2
W41	15.3	15.6	15.4	15.6
W43	15.4	15.2	14.9	15.6
W44	18.6	18.6	18.5	18.9
W47	26.2	26.6	26	26.7
W48	26.2	26.7	25.8	26.8

	<b>Conductivity umho/cm</b>			
<b>Well</b>	<b>Oct-13</b>	<b>Jan-14</b>	<b>Apr-14</b>	<b>Jul-14</b>
WRW-2	310.00	426.00	388.00	357.00
W7	1830.00	169.9	1690.00	1729
W10	756.00	815	740.00	833
W13R	881.00	857	852.00	837
W15	428.00	404	412.00	431
W16	296.00	311	325.00	333
W18	4430.00	4.6	5120.00	5560
W22	2500.00	660	1601.00	1690
W24	59.70	59.20	59.20	58.20
W26	182.40	203.00	176.00	180.60
W29	1778.00	1059	917.00	901
W30	1233.00	119.3	638.00	749
W32	1814.00	1570	1194.00	1405
W33	148.10	144.00	197.00	173.80
W39	472.00	679.00	949.00	755.00
W41	522.00	479.00	576.00	595.00
W43	107.50	96.40	103.80	96.30
W44	89.60	100.80	98.00	92.50
W47	551.00	520	495.00	511
W48	111.30	113.20	115.50	129.20



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	pH			
Well	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	5.92	7.43	4.42	4.44
W7	7.22	6.78	7.08	7.19
W10	5.82	5.56	5.89	6.09
W13R	6.48	6.49	6.48	6.52
W15	6.29	6.39	6.22	6.42
W16	6.29	6.23	6.29	6.31
W18	7.76	7.21	7.25	7.57
W22	5.33	5.01	4.45	5.24
W24	5.44	5.61	5.61	6.42
W26	5.48	5.82	5.55	5.56
W29	6.75	6.66	6.60	7.08
W30	5.74	6.3	6.57	6.87
W32	7.14	6.66	6.44	6.97
W33	5.54	5.64	5.71	5.65
W39	5.43	5.30	5.24	5.29
W41	5.68	5.63	5.99	5.59
W43	5.40	5.51	5.61	5.89
W44	5.25	5.34	5.44	5.41
W47	6.08	6.25	6.11	6.26
W48	5.57	5.61	6.00	5.62

	Ammonia mg/L			
Well	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<1	<1	<1	<1
W7	55.9	49.4	45.50	53.7
W10	6.19	2.33	4.63	7.54
W13R	48.1	47.5	43.20	49.6
W15	12.7	12.9	13.40	14.7
W16	15.3	17.8	18.10	19.2
W18	103	103	97.50	139
W22	65	24.4	30.90	69
W24	<1	<1	<1	<1
W26	<1	<1	<1	<1
W29	19.7	12.6	10.20	16.2
W30	<1	1.5	<1	<1
W32	69.6	63.7	57.80	64.2
W33	<1	<1	<1	<1
W39	<1	<1	<1	<1
W41	<1	<1	<1	<1
W43	<1	<1	<1	<1
W44	<1	<1	<1	<1
W47	18.9	19.4	19.40	19.6
W48	<1	<1	<1	<1





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Well	Fluoride mg/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	<0.5	<0.5	<0.5	<0.5
W7	8.15	7.3	7.80	8.25
W10	2.20	2.74	2.35	2.67
W13R	10.20	11.3	9.50	10.1
W15	2.80	2.36	2.48	2.27
W16	9.65	9.3	8.20	9.2
W18	7.60	7.4	6.70	7.55
W22	15.80	5.3	8.25	8.15
W24	<0.5	<0.5	<0.5	<0.5
W26	1.91	1.84	1.91	2.09
W29	4.44	5	4.90	5.8
W30	16.60	12.6	11.30	11.5
W32	3.53	3.61	3.40	4.35
W33	<0.5	<0.5	<0.5	<0.5
W39	<0.5	<0.5	<0.5	<0.5
W41	<0.5	<0.5	<0.5	<0.5
W43	<0.5	<0.5	<0.5	<0.5
W44	<0.5	<0.5	<0.5	<0.5
W47	5.85	5.35	5.85	5.1
W48	<0.5	<0.5	<0.5	<0.5

Well	Nitrate mg/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	28.00	41.00	33.00	34.00
W7	160.00	130	130.00	150
W10	39.00	59	41.00	59
W13R	31.00	30	28.00	30
W15	23.00	21	20.00	470
W16	1.90	0.2	2.20	15
W18	510.00	560	530.00	690
W22	260.00	56	140.00	210
W24	0.04	0.07	0.05	<0.02
W26	4.80	9.30	3.30	3.80
W29	170.00	97	70.00	78
W30	140.00	100	36.00	40
W32	180.00	150	120.00	150
W33	8.10	7.90	12.00	110.00
W39	56.00	13.00	99.00	92.00
W41	43.00	46.00	50.00	62.00
W43	3.40	5.30	6.40	6.50
W44	2.80	3.70	3.10	5.40
W47	37.00	27	24.00	29
W48	5.20	11.00	4.70	4.70

1. Wells exceeding drinking water standards for fluoride (4 mg/l) or nitrate (10 mg/l) are marked in red.



Radiological results for Gross Alpha, Gross Beta and Tritium are tabulated below. Gamma results (fission and activation products) are attached, as reported by General Engineering Laboratories (GEL).

Well	Gross Alpha pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	3.05	4.45	2.66	4.09
W7	5.12	3.9	5.23	7.58
W10	5.02	2.78	4.26	2.97
W13R	2.56	5.85	1.15	0.945
W15	0.37	1.96	2.14	5.31
W16	0.00	0	2.25	1.41
W18	19.90	13.4	23.50	13.2
W22	8.13	11.9	6.67	9.6
W24	4.88	1.30	0.00	1.18
W26	1.86	0.53	1.74	0.71
W29	6.94	0	3.78	6.11
W30	19.50	18.5	24.30	48.1
W32	14.70	9.78	14.20	5.48
W33	3.17	0.00	1.80	5.18
W39	5.31	0.00	0.92	7.17
W41	2.40	0.69	5.75	4.19
W43	7.35	0.00	1.02	1.05
W44	2.88	0.00	0.00	2.18
W47	9.98	2.86	2.73	3.91
W48	6.70	0.00	1.02	0.00

Well	Gross Beta pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	12.50	22.90	14.80	14.10
W7	164.00	144	127.00	147
W10	73.40	97.1	66.70	79.2
W13R	140.00	155	120.00	97.6
W15	268.00	241	191.00	204
W16	16.10	22.4	18.30	12.8
W18	248.00	204	175.00	156
W22	91.20	56.7	46.10	59.7
W24	2.34	0.00	0.00	0.10
W26	13.50	17.40	4.63	7.83
W29	32.10	13.1	11.40	10.4
W30	61.80	42.3	33.20	60.4
W32	273.00	250	276.00	253
W33	9.44	10.10	5.52	6.38
W39	19.30	15.30	18.70	17.40
W41	19.30	17.60	16.50	24.30
W43	11.20	2.11	1.23	8.38
W44	4.21	4.75	5.79	0.59
W47	102.00	2.92	63.60	58.8
W48	16.60	9.86	10.20	12.60





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Well	Tritium pCi/L			
	Oct-13	Jan-14	Apr-14	Jul-14
WRW-2	0.00	232.00	32.40	242.00
W7	0.00	32.7	365.00	11.5
W10	3.28	120	222.00	213
W13R	0.00	70.2	254.00	0.344
W15	16.00	66.9	339.00	30.2
W16	72.70	155	12.30	45.3
W18	244.00	14	362.00	181
W22	0.00	78.8	0.00	246
W24	62.10	141.00	61.30	0.00
W26	0.00	128.00	154.00	0.00
W29	168.00	373	303.00	0
W30	0.00	362	0.00	125
W32	56.50	243	128.00	0
W33	0.00	219.00	204.00	0.00
W39	0.00	50.50	252.00	140.00
W41	105.00	40.60	193.00	0.00
W43	0.00	244.00	191.00	0.00
W44	0.00	59.60	205.00	0.00
W47	139.00	296	370.00	14.7
W48	0.00	60.30	418.00	0.00

Please contact me at (803) 647-3171 if you have any questions regarding these results.

Sincerely,  
 WESTINGHOUSE ELECTRIC COMPANY LLC

Cynthia J. Logsdon  
 Principal Environmental Engineer  
 Environment, Health & Safety  
 Columbia Fuel Fabrication Facility, Westinghouse Electric Company

Enclosures/

- a) Shealy Environmental Services lab report, VOC analytical results
- b) GEL lab report, radiological analytical results

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>October 14, 2013</b>	
Field Personnel	<b>BTF</b>		
Facility Name	<b>Westinghouse</b>		
Well ID #	<b>RW-2</b>		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	<b>31.25</b>		
Depth To Groundwater (DGW) =	<b>18.11</b>		
Length Of Water Column (LWC) =	<b>13.14</b>		
1 Casing Volume (OCV) = LWC x	<b>0.163</b>	=	<b>2.1</b> gal.
3 Casing Volumes =	<b>6.4</b>	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	2.1	4.2	6.4			
0129	0932	0976	0939			
460	449	447	447			
241	20	20	19.1			
194	272.5	282	281	310.7		
1	1	1	1			

Well Sample Time: **0942**  
 Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>October 14, 2013</b>	
Field Personnel	<b>BTF</b>		
Facility Name	<b>Westinghouse</b>		
Well ID #	<b>MW-26</b>		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	<b>32.00</b>		
Depth To Groundwater (DGW) =	<b>25.16</b>		
Length Of Water Column (LWC) =	<b>6.84</b>		
1 Casing Volume (OCV) = LWC x	<b>0.163</b>	=	<b>1.1</b> gal.
3 Casing Volumes =	<b>3.3</b>	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	<input checked="" type="radio"/> SSB <input type="radio"/> WW <input type="radio"/> GP    Other _____		
Method of Sample Collection	<input checked="" type="radio"/> SSB <input type="radio"/> WW <input type="radio"/> GP    Other _____		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092    5" = 1.02  
 2" = 0.163    6" = 1.47  
 3" = 0.367    7" = 2.00  
 4" = 0.652    8" = 2.61

### Field Analyses

1 <sup>st</sup>	1.1	2.2	3.3	Well Sample Time:
1014	1616	1019	1621	1023 <u>Remarks:</u>
5.52	5.58	5.43	5.42	
19.4	18.4	18.8	18.8	
158.6	154.3	160	161	
1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		October 14, 2013	
Field Personnel	BTF		
Facility Name	Westinghouse		
Well ID #	MW-41		
Weather Conditions	Air Temperature		
Total Well Depth (TWD) = 27.00		Casing Diameter: 2 inches	
Depth To Groundwater (DGW) = 15.30		Casing Material: <u>PVC</u> - Metal	
Length Of Water Column (LWC) = 11.7		Guard Pipe: PVC - <u>Metal</u> - No	
1 Casing Volume (OCV) = LWC x 0.163 = 1.9 gal.		Protective Abutment: Y - <u>N</u>	
3 Casing Volumes = 5.7 gal. = Standard Evacuation Volume		Integrity Satisfactory: Y - N	
Total Volume of Water Removed =		Well Yield: Low - Mod - High	
Method of Well Evacuation: <u>TB</u> SSB WW GP Other		Remarks:	
Method of Sample Collection: <u>TB</u> SSB WW GP Other			

**Evacuation and Collection Methods**  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
151	1.9	3.8	5.7			
6452	6455	0458	1601			
6.23	5.83	5.85	5.85			
26	26	20	19.9			
169	482	472	472	521.0		
1	1	1	1			
1	1	1	1			

Well Sample Time: 1003

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 14, 2013		Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	BTF		Guard Pipe: PVC Metal - No	Locking Cap: Y N
Facility Name	Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: Y - N
Well ID #	MW-48		Well Yield: Low - Mod - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	44.06			
Depth To Groundwater (DGW) =	26.15			
Length Of Water Column (LWC) =	17.85			
1 Casing Volume (OCV) = LWC x	0.651 = 11.6			
3 Casing Volumes =	35			
Total Volume of Water Removed =	gal. = Standard Evacuation Volume			
Method of Well Evacuation	TB	SSB	WW	GP
Method of Sample Collection	(TB)	SSB	WW	GP

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
11.6	22	5.52	19.4	109	1	1
103.7	1043	5.50	19.6	107	1	1
104.9	5.67	19.8	102	112.8		
105.4	104	19.6	102	112.8		
109	107	19.6	102	112.8		
1	1	1	1	1		
1	1	1	1	1		

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Well Sample Time: 1056

Remarks:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: OJ14019  
Date Completed: 10/29/2013



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* OJ 14019 \*



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

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## Case Narrative

### Westinghouse Electric Company

Lot Number: OJ14019

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: OJ14019

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	10/14/2013 0942	10/14/2013
002	MW-26	Aqueous	10/14/2013 1023	10/14/2013
003	MW-41	Aqueous	10/14/2013 1003	10/14/2013
004	MW-48	Aqueous	10/14/2013 1050	10/14/2013
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: OJ14019

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	130		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	12		ug/L	7
002	MW-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.7		ug/L	11
003	MW-41	Aqueous	Tetrachloroethene	8260B	160		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	22		ug/L	17
004	MW-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.0		ug/L	21
004	MW-48	Aqueous	Tetrachloroethene	8260B	160		ug/L	22
004	MW-48	Aqueous	Trichloroethene	8260B	2.8		ug/L	22

(8 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 10/14/2013 0942	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 0942	BTF		
1		(Specific Con) 120.1	1	10/14/2013 0942	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 0942	BTF		
1		(Water level )	1	10/14/2013 0942	BTF		
1		(Well Depth)	1	10/14/2013 0942	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.47			su	1
Specific Conductance @ 25° C - Field		120.1	311		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	18.11			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/14/2013 0942							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1403	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/14/2013 0942							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1403	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	130		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	12		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/14/2013 0942

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0116	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/14/2013 0942

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0116	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		78	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		70	24-127
Nitrobenzene-d5		72	38-127
Phenol-d5		73	28-128
Terphenyl-d14		58	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-002
Description: MW-26	Matrix: Aqueous
Date Sampled: 10/14/2013 1023	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1023	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1023	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1023	BTF		
1		(Water level )	1	10/14/2013 1023	BTF		
1		(Well Depth)	1	10/14/2013 1023	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.42			su	1
Specific Conductance @ 25° C - Field		120.1	182		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.8			° C	1
Water level depth from top of casing		No Method	25.16			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1425	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.7		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1425	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-002

Description: MW-26

Matrix: Aqueous

Date Sampled: 10/14/2013 1023

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0141	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-002			
Description: MW-26				Matrix: Aqueous			
Date Sampled: 10/14/2013 1023							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0141	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		82	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		69	24-127
Nitrobenzene-d5		72	38-127
Phenol-d5		70	28-128
Terphenyl-d14		51	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 10/14/2013 1003	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1003	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1003	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1003	BTF		
1		(Water level )	1	10/14/2013 1003	BTF		
1		(Well Depth)	1	10/14/2013 1003	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.85			su	1
Specific Conductance @ 25° C - Field		120.1	522		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	15.30			feet	1
Well Depth		No Method	27.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1448	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1448	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	160		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	22		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/14/2013 1003

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0206	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/14/2013 1003							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0206	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		83	41-144
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		72	24-127
Nitrobenzene-d5		73	38-127
Phenol-d5		74	28-128
Terphenyl-d14		76	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: OJ14019-004
Description: MW-48	Matrix: Aqueous
Date Sampled: 10/14/2013 1050	
Date Received: 10/14/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-	1	10/14/2013 1050	BTF		
1		(Specific Con) 120.1	1	10/14/2013 1050	BTF		
1		(Temperature ) SM 2550B-	1	10/14/2013 1050	BTF		
1		(Water level )	1	10/14/2013 1050	BTF		
1		(Well Depth)	1	10/14/2013 1050	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.67			su	1
Specific Conductance @ 25° C - Field		120.1	113		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.8			° C	1
Water level depth from top of casing		No Method	26.15			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-004			
Description: MW-48				Matrix: Aqueous			
Date Sampled: 10/14/2013 1050							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	10/19/2013 1511	ALL		32343	
Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run	
Acetone	67-64-1	8260B	ND		20	ug/L	1	
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1	
Acrolein	107-02-8	8260B	ND		20	ug/L	1	
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	ug/L	1	
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1	
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1	
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1	
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1	
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1	
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1	
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1	
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	5.0		1.0	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1	
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1	
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1	
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1	
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1	
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1	
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1	
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1	

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: OJ14019-004			
Description: MW-48				Matrix: Aqueous			
Date Sampled: 10/14/2013 1050							
Date Received: 10/14/2013							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/19/2013 1511	ALL		32343

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	160		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.8		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-004

Description: MW-48

Matrix: Aqueous

Date Sampled: 10/14/2013 1050

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0231	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.2	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.2	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.2	ug/L	1
Anthracene	120-12-7	8270D	ND		5.2	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.2	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.2	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.2	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.2	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.2	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.2	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.2	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.2	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		26	ug/L	1
Carbazole	86-74-8	8270D	ND		5.2	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.2	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.2	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.2	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.2	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.2	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.2	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.2	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.2	ug/L	1
Chrysene	218-01-9	8270D	ND		5.2	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.2	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.2	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.2	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.2	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.2	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.2	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.2	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.2	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.2	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.2	ug/L	1
Fluorene	86-73-7	8270D	ND		5.2	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.2	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.2	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: OJ14019-004

Description: MW-48

Matrix: Aqueous

Date Sampled: 10/14/2013 1050

Date Received: 10/14/2013

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/19/2013 0231	RBH	10/16/2013 1609	32062

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.2	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.2	ug/L	1
Isophorone	78-59-1	8270D	ND		5.2	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.2	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.2	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.2	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.2	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.2	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.2	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.2	ug/L	1
Phenol	108-95-2	8270D	ND		5.2	ug/L	1
Pyrene	129-00-0	8270D	ND		5.2	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.2	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.2	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		79	41-144
2-Fluorobiphenyl		79	37-129
2-Fluorophenol		68	24-127
Nitrobenzene-d5		71	38-127
Phenol-d5		69	28-128
Terphenyl-d14		82	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 24 of 24

Level 1 Report v2.1

**Shealy Environmental Services, Inc.**  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9701  
[www.shealyfab.com](http://www.shealyfab.com)

Number 33319

Client <b>Westinghouse</b>		Report to Contact		Sampler (Printed Name) <b>Brian Fedoruk</b>		Quote No.	
Address		Telephone No. / Fax No. / Email		Waybill No.		Page <b>1</b> of <b>1</b>	
City <b>Los Angeles</b>	State <b>CA</b>	Zip Code	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.		Number of Containers Bottle (See Instructions on back)		
Project Name <b>Well Sampling</b>		P.O. Number		Matrix Composite Grab		Preservative	
Sample ID / Description (Containers for each sample may be combined on one line)	Date <b>2/3</b>	Time <b>0942</b>	Time <b>1023</b>	Time <b>1003</b>	Time <b>1050</b>	Lot No. <b>0114019</b>	
<b>RW-2</b>	<b>10/14/17</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	Remarks / Cooler ID	
<b>MW-26</b>							
<b>MW-41</b>							
<b>MW-48</b>							
Turn Around Time Required (Prior approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		QC Requirements (Specify)		Possible Hazard Identification <input type="checkbox"/> Lethal-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler <b>3/</b>	Date <b>10/14/17</b>	Time <b>1215</b>	1. Received by		Date	Time	
2. Relinquished by	Date	Time	2. Received by		Date	Time	
3. Relinquished by	Date	Time	3. Received by		Date	Time	
4. Relinquished by	Date	Time	4. Laboratory Received by <b>Edh</b>		Date <b>10-14-13</b>	Time <b>1215</b>	
Note: All samples are retained for six weeks from receipt unless other arrangements are made.			LAB USE ONLY Received on (or Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Receipt Temp. <b>1-8</b> °C		Temp. Blank <input type="checkbox"/> Y <input type="checkbox"/> N



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 13

Page 1 of 1  
Replaces Date: 09/24/13  
Effective Date: 09/26/13

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: ELC 10/14/13 Lot #: 0514019

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>1339/2-11-8</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>-0.3</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/phenol		
Sample labels verified by: <u>CMT</u> Date: <u>10/14/13</u>		

### Corrective Action taken, if necessary:

Was client notified: Yes ☐ No ☐

Did client respond: Yes ☐ No ☐

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_



November 27, 2013

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental - PO 4500467846  
Work Order: 335887

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 18, 2013. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500467846  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

335887

VENDOR: General Engineering Laboratories (GEL)Month: OctYear: 2013

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/14/13 09:42	1000	X	X	X		X	REC
WELL	#3A	10/16/13 09:57	1000	X	X	X		X	REC
WELL	#7	10/15/13 11:30	1000	X	X	X		X	REC
WELL	#10	10/15/13 13:05	1000	X	X	X		X	REC
WELL	#13R	10/15/13 11:08	1000	X	X	X		X	REC
WELL	#14	10/14/13 14:05	1000	X	X	X		X	REC
WELL	#15	10/14/13 13:21	1000	X	X	X		X	REC
WELL	#16	10/14/13 14:20	1000	X	X	X		X	REC
WELL	#17	10/15/13 10:17	1000	X	X	X		X	REC
WELL	#18	10/15/13 09:46	1000	X	X	X		X	REC
WELL	#20	10/16/13 10:36	1000	X	X	X		X	REC
WELL	#22	10/15/13 09:21	1000	X	X	X		X	REC
WELL	#23R	10/14/13 13:39	1000	X	X	X		X	REC
WELL	#24	10/14/13 11:16	1000	X	X	X		X	REC
WELL	#26	10/14/13 10:23	1000	X	X	X		X	REC
WELL	#27	10/16/13 10:15	1000	X	X	X		X	REC
WELL	#28	10/15/13 10:44	1000	X	X	X		X	REC
WELL	#29	10/15/13 08:47	1000	X	X	X		X	REC
WELL	#30	10/15/13 09:06	1000	X	X	X		X	REC
WELL	#32	10/15/13 13:25	1000	X	X	X		X	REC
WELL	#33	10/14/13 11:37	1000	X	X	X		X	REC
WELL	#38	10/14/13 09:00	1000	X	X	X		X	REC
WELL	#39	10/16/13 11:24	1000	X	X	X		X	REC
WELL	#41R	10/14/13 10:03	1000	X	X	X		X	REC
WELL	#43	10/16/13 11:42	1000	X	X	X		X	REC

Please email [crewsr@westinghouse.com](mailto:crewsr@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 10/17/13

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.





## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUE</u>		SDG/AR/COC/Work Order: <u>335887</u>
Received By: <u>SE</u>		Date Received: <u>10.18.13</u>
Suspected Hazard Information	Yes	No
*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
COC/Samples marked as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u>
Classified Radioactive II or III by RSO?		If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		
Package, COC, and/or Samples marked as beryllium or asbestos containing?		If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: Ice bags    Blue ice    Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>41502182</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected: <u>1 bottle per ID</u>
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground <u>UPS</u> Field Services    Courier    Other  <u>1Z 222A0 @13 9559 6404</u> <u>9430 7996</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 335887 GEL Work Order: 335887

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 335887001  
Matrix: Ground Water  
Collect Date: 14-OCT-13 09:42  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.48	+/-27.9	33.2		pCi/L		RXF2	11/01/13	0903 1341420	1
Americium-241	U	7.21	+/-22.7	36.5		pCi/L					
Antimony-124	U	12.6	+/-9.93	22.6		pCi/L					
Antimony-125	U	-0.513	+/-10.9	19.5		pCi/L					
Barium-133	U	-2.19	+/-5.62	9.86		pCi/L					
Barium-140	U	-2.09	+/-11.2	21.0		pCi/L					
Beryllium-7	U	44.3	+/-95.2	75.7		pCi/L					
Bismuth-212	U	-39	+/-64.9	108		pCi/L					
Bismuth-214	U	5.73	+/-16.0	16.5		pCi/L					
Cerium-139	U	-1.29	+/-3.85	6.56		pCi/L					
Cerium-141	U	-1.45	+/-8.72	14.5		pCi/L					
Cerium-144	U	2.03	+/-24.7	43.3		pCi/L					
Cesium-134	U	-3.04	+/-4.25	7.38		pCi/L					
Cesium-136	U	9.23	+/-12.6	25.1		pCi/L					
Cesium-137	U	2.77	+/-6.06	7.78	10.0	pCi/L					
Chromium-51	U	-51.8	+/-49.9	82.2		pCi/L					
Cobalt-56	U	1.92	+/-4.57	8.71		pCi/L					
Cobalt-57	U	-0.677	+/-3.12	5.43		pCi/L					
Cobalt-58	U	-3.18	+/-4.75	8.27		pCi/L					
Cobalt-60	U	-4.42	+/-4.30	6.84		pCi/L					
Europium-152	U	3.29	+/-11.6	21.2		pCi/L					
Europium-154	U	-7.01	+/-10.5	17.7		pCi/L					
Europium-155	U	-0.878	+/-12.4	21.9		pCi/L					
Iridium-192	U	5.31	+/-4.46	8.51		pCi/L					
Iron-59	U	-0.462	+/-7.94	14.8		pCi/L					
Lead-210	U	-651	+/-637	957		pCi/L					
Lead-212	U	9.27	+/-10.6	13.1		pCi/L					
Lead-214	U	-1.19	+/-10.9	17.5		pCi/L					
Manganese-54	U	1.01	+/-4.68	8.68		pCi/L					
Mercury-203	U	4.50	+/-6.63	8.67		pCi/L					
Neodymium-147	U	18.8	+/-76.4	139		pCi/L					
Neptunium-239	U	-12.6	+/-32.5	56.1		pCi/L					
Niobium-94	U	0.540	+/-3.96	7.07		pCi/L					
Niobium-95	U	-2.12	+/-5.05	8.55		pCi/L					
Potassium-40	U	-48.5	+/-54.2	86.7		pCi/L					
Promethium-144	U	-1.04	+/-4.26	7.36		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 335887001

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.372	+/-5.01	8.92	pCi/L
Radium-228	U	6.48	+/-27.9	33.2	pCi/L
Ruthenium-106	U	-2.35	+/-44.5	70.9	pCi/L
Silver-110m	U	2.02	+/-4.42	7.19	pCi/L
Sodium-22	U	-2.75	+/-3.75	6.28	pCi/L
Thallium-208	U	-0.11	+/-4.84	7.60	pCi/L
Thorium-230	U	-116	+/-1560	2440	pCi/L
Thorium-234	U	289	+/-353	293	pCi/L
Tin-113	U	-1.79	+/-5.44	9.56	pCi/L
Uranium-235	U	11.5	+/-31.4	44.9	pCi/L
Uranium-238	U	289	+/-353	293	pCi/L
Yttrium-88	U	-0.296	+/-3.79	7.42	pCi/L
Zinc-65	U	2.79	+/-7.73	15.0	pCi/L
Zirconium-95	U	-3.29	+/-9.53	13.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.05	+/-2.92	4.69	5.00	pCi/L	JAOC	11/06/13	2112	1341307	2
Beta		12.5	+/-2.85	3.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-41.5	+/-133	236	300	pCi/L	MYM1	11/05/13	0003	1341885	3
---------------	---	-------	--------	-----	-----	-------	------	----------	------	---------	---

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 3A	Project:	WNUC00124
Sample ID:	335887002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 09:57		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.2	+/-15.1	25.3		pCi/L		RXF2	11/01/13	0904 1341420	1
Americium-241	U	2.75	+/-21.3	33.6		pCi/L					
Antimony-124	U	3.49	+/-9.71	19.5		pCi/L					
Antimony-125	U	-2.61	+/-8.74	15.7		pCi/L					
Barium-133	U	-2.31	+/-5.05	7.34		pCi/L					
Barium-140	U	-5.58	+/-11.8	17.7		pCi/L					
Beryllium-7	U	-19.5	+/-28.6	49.6		pCi/L					
Bismuth-212	U	17.5	+/-46.2	86.4		pCi/L					
Bismuth-214	U	3.42	+/-8.62	14.7		pCi/L					
Cerium-139	U	-1.32	+/-2.85	4.99		pCi/L					
Cerium-141	U	1.75	+/-8.01	10.2		pCi/L					
Cerium-144	U	2.61	+/-20.7	36.5		pCi/L					
Cesium-134	U	-0.867	+/-3.46	6.09		pCi/L					
Cesium-136	U	-0.324	+/-9.07	17.0		pCi/L					
Cesium-137	U	-0.825	+/-4.28	6.94	10.0	pCi/L					
Chromium-51	U	-19.1	+/-40.9	69.2		pCi/L					
Cobalt-56	U	4.10	+/-4.49	7.28		pCi/L					
Cobalt-57	U	-0.355	+/-2.66	4.46		pCi/L					
Cobalt-58	U	-3.06	+/-4.20	6.14		pCi/L					
Cobalt-60	U	1.80	+/-3.11	5.84		pCi/L					
Europium-152	U	-1.36	+/-10.4	17.3		pCi/L					
Europium-154	U	9.54	+/-8.06	17.1		pCi/L					
Europium-155	U	-3.69	+/-10.6	17.7		pCi/L					
Iridium-192	U	3.18	+/-3.64	6.73		pCi/L					
Iron-59	U	-5.42	+/-7.03	12.0		pCi/L					
Lead-210	U	403	+/-1170	999		pCi/L					
Lead-212	U	-2.56	+/-7.56	11.7		pCi/L					
Lead-214	U	6.14	+/-12.8	14.2		pCi/L					
Manganese-54	U	0.813	+/-3.21	5.94		pCi/L					
Mercury-203	U	-0.799	+/-4.68	6.96		pCi/L					
Neodymium-147	U	29.1	+/-53.8	103		pCi/L					
Neptunium-239	U	-4.1	+/-27.2	45.6		pCi/L					
Niobium-94	U	0.128	+/-3.16	5.70		pCi/L					
Niobium-95	U	-1.09	+/-4.39	7.00		pCi/L					
Potassium-40	U	25.6	+/-47.9	86.1		pCi/L					
Promethium-144	U	-0.655	+/-3.41	6.01		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 335887002

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.416	+/-4.23	7.78	pCi/L
Radium-228	U	-9.2	+/-15.1	25.3	pCi/L
Ruthenium-106	U	-13	+/-30.0	52.3	pCi/L
Silver-110m	U	-3.52	+/-3.18	5.15	pCi/L
Sodium-22	U	3.87	+/-2.72	6.05	pCi/L
Thallium-208	U	0.933	+/-5.49	6.11	pCi/L
Thorium-230	U	1050	+/-1370	2230	pCi/L
Thorium-234	UI	0.00	+/-341	263	pCi/L
Tin-113	U	-0.0479	+/-4.51	7.84	pCi/L
Uranium-235	U	5.47	+/-25.1	33.9	pCi/L
Uranium-238	UI	0.00	+/-341	263	pCi/L
Yttrium-88	U	-3.31	+/-3.64	5.95	pCi/L
Zinc-65	U	-1.37	+/-7.79	12.2	pCi/L
Zirconium-95	U	0.273	+/-5.82	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.768	+/-2.46	4.68	5.00	pCi/L	JAOC	11/06/13	2112	1341307	2
Beta	U	-0.305	+/-1.73	3.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-135	+/-126	232	300	pCi/L	MYM1	11/05/13	0020	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 7  
Sample ID: 335887003  
Matrix: Ground Water  
Collect Date: 15-OCT-13 11:30  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.1	+/-18.9	22.3		pCi/L		RXF2	11/01/13	1134 1341420	1
Americium-241	U	8.57	+/-14.8	23.7		pCi/L					
Antimony-124	U	-4.91	+/-8.64	14.1		pCi/L					
Antimony-125	U	6.49	+/-9.14	15.2		pCi/L					
Barium-133	U	0.542	+/-4.57	7.11		pCi/L					
Barium-140	U	1.53	+/-8.96	17.6		pCi/L					
Beryllium-7	U	-10.5	+/-30.2	51.2		pCi/L					
Bismuth-212	U	-2.11	+/-46.4	84.4		pCi/L					
Bismuth-214	U	5.86	+/-12.9	15.0		pCi/L					
Cerium-139	U	-1.62	+/-2.77	4.81		pCi/L					
Cerium-141	U	5.13	+/-5.91	10.8		pCi/L					
Cerium-144	U	-4.71	+/-17.9	31.8		pCi/L					
Cesium-134	U	-3.0	+/-4.02	5.81		pCi/L					
Cesium-136	U	0.218	+/-9.46	17.4		pCi/L					
Cesium-137	U	-2.33	+/-4.62	6.82	10.0	pCi/L					
Chromium-51	U	32.3	+/-41.4	68.6		pCi/L					
Cobalt-56	U	1.66	+/-3.56	6.82		pCi/L					
Cobalt-57	U	-0.353	+/-2.33	4.17		pCi/L					
Cobalt-58	U	0.158	+/-3.77	6.89		pCi/L					
Cobalt-60	U	-2.6	+/-3.66	5.53		pCi/L					
Europium-152	U	1.82	+/-9.33	16.6		pCi/L					
Europium-154	U	-1.58	+/-7.88	14.9		pCi/L					
Europium-155	U	-2.62	+/-9.85	16.4		pCi/L					
Iridium-192	U	3.37	+/-3.52	6.19		pCi/L					
Iron-59	U	-3.45	+/-7.45	12.8		pCi/L					
Lead-210	U	276	+/-346	471		pCi/L					
Lead-212	U	-5.57	+/-6.52	10.7		pCi/L					
Lead-214	U	2.93	+/-12.1	14.0		pCi/L					
Manganese-54	U	-1.13	+/-3.05	5.36		pCi/L					
Mercury-203	U	-2.47	+/-3.71	6.27		pCi/L					
Neodymium-147	U	0.482	+/-52.2	97.2		pCi/L					
Neptunium-239	U	-9.35	+/-24.6	43.7		pCi/L					
Niobium-94	U	-1.98	+/-3.20	5.51		pCi/L					
Niobium-95	U	1.21	+/-3.64	6.86		pCi/L					
Potassium-40	U	-50.3	+/-45.5	70.9		pCi/L					
Promethium-144	U	-0.854	+/-3.61	6.40		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	335887003	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.547	+/-4.09	7.22	pCi/L
Radium-228	U	-4.1	+/-18.9	22.3	pCi/L
Ruthenium-106	U	-20.2	+/-29.6	51.1	pCi/L
Silver-110m	U	-1.48	+/-3.24	4.85	pCi/L
Sodium-22	U	-0.405	+/-2.81	5.36	pCi/L
Thallium-208	U	4.95	+/-6.04	5.50	pCi/L
Thorium-230	U	-44.1	+/-1080	1630	pCi/L
Thorium-234	U	44.2	+/-177	225	pCi/L
Tin-113	U	3.40	+/-6.34	7.73	pCi/L
Uranium-235	U	21.8	+/-19.8	33.8	pCi/L
Uranium-238	U	44.2	+/-177	225	pCi/L
Yttrium-88	U	-2.14	+/-3.51	6.00	pCi/L
Zinc-65	U	-1.84	+/-6.69	11.8	pCi/L
Zirconium-95	U	-4.32	+/-6.05	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		5.12	+/-3.62	4.90	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		164	+/-8.11	2.67	5.00	pCi/L					
Alpha	U	0.817	+/-2.69	4.86	5.00	pCi/L	JAOC	11/11/13	1741	1341307	3
Beta		148	+/-5.19	3.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	145	+/-142	238	300	pCi/L	MYM1	11/05/13	0036	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	335887003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 335887004  
Matrix: Ground Water  
Collect Date: 15-OCT-13 13:05  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.6	+/-16.5	25.4		pCi/L		RXF2	11/01/13	1135 1341420	1
Americium-241	U	-22.9	+/-30.7	51.4		pCi/L					
Antimony-124	U	-3.4	+/-8.52	15.7		pCi/L					
Antimony-125	U	-7.6	+/-9.71	16.2		pCi/L					
Barium-133	U	-3.22	+/-4.47	7.56		pCi/L					
Barium-140	U	0.955	+/-8.50	17.3		pCi/L					
Beryllium-7	U	0.535	+/-36.3	64.3		pCi/L					
Bismuth-212	U	-10.1	+/-47.5	86.6		pCi/L					
Bismuth-214	U	2.21	+/-11.0	15.2		pCi/L					
Cerium-139	U	0.618	+/-3.32	5.68		pCi/L					
Cerium-141	U	-5.58	+/-8.86	12.7		pCi/L					
Cerium-144	U	-12.1	+/-22.5	37.0		pCi/L					
Cesium-134	U	1.10	+/-3.52	6.82		pCi/L					
Cesium-136	U	2.86	+/-9.68	18.9		pCi/L					
Cesium-137	U	-2.61	+/-3.37	5.83	10.0	pCi/L					
Chromium-51	U	-11.8	+/-40.7	71.4		pCi/L					
Cobalt-56	U	1.46	+/-3.60	7.03		pCi/L					
Cobalt-57	U	-4.33	+/-2.87	4.44		pCi/L					
Cobalt-58	U	0.749	+/-3.64	6.96		pCi/L					
Cobalt-60	U	-0.918	+/-3.91	7.00		pCi/L					
Europium-152	U	-1.04	+/-9.51	16.9		pCi/L					
Europium-154	U	-7.18	+/-9.25	15.1		pCi/L					
Europium-155	U	1.54	+/-13.2	21.7		pCi/L					
Iridium-192	U	-1.12	+/-3.68	6.45		pCi/L					
Iron-59	U	-4.72	+/-7.92	13.6		pCi/L					
Lead-210	U	708	+/-1180	2160		pCi/L					
Lead-212	U	3.25	+/-9.35	12.1		pCi/L					
Lead-214	U	-6.48	+/-9.60	14.3		pCi/L					
Manganese-54	U	-1.33	+/-3.99	6.10		pCi/L					
Mercury-203	U	0.314	+/-4.12	7.43		pCi/L					
Neodymium-147	U	27.1	+/-59.4	111		pCi/L					
Neptunium-239	U	-6.23	+/-30.6	51.8		pCi/L					
Niobium-94	U	0.974	+/-3.26	6.21		pCi/L					
Niobium-95	U	4.18	+/-5.31	7.01		pCi/L					
Potassium-40	U	7.22	+/-56.6	59.7		pCi/L					
Promethium-144	U	1.73	+/-3.36	6.51		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 335887004

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.46	+/-4.17	7.68	pCi/L
Radium-228	U	-10.6	+/-16.5	25.4	pCi/L
Ruthenium-106	U	4.32	+/-31.5	56.6	pCi/L
Silver-110m	U	0.856	+/-3.10	5.97	pCi/L
Sodium-22	U	-2.87	+/-3.33	5.33	pCi/L
Thallium-208	U	0.382	+/-4.48	7.59	pCi/L
Thorium-230	U	1970	+/-3250	2960	pCi/L
Thorium-234	U	-102	+/-297	413	pCi/L
Tin-113	U	0.326	+/-5.29	8.34	pCi/L
Uranium-235	U	-22.9	+/-28.1	37.5	pCi/L
Uranium-238	U	-102	+/-297	413	pCi/L
Yttrium-88	U	-3.06	+/-3.30	5.22	pCi/L
Zinc-65	U	-1.91	+/-7.26	13.0	pCi/L
Zirconium-95	U	3.02	+/-6.64	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.51	+/-3.40	4.72	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		59.2	+/-5.14	3.44	5.00	pCi/L					
Alpha		5.02	+/-3.30	4.80	5.00	pCi/L	JAOC	11/11/13	1704	1341307	3
Beta		73.4	+/-4.87	2.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	40.4	+/-131	226	300	pCi/L	MYM1	11/05/13	0052	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	335887004	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005  
Matrix: Ground Water  
Collect Date: 15-OCT-13 11:08  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.98	+/-22.0	35.7		pCi/L		RXF2	11/01/13	1135 1341420	1
Americium-241	U	9.41	+/-19.4	21.9		pCi/L					
Antimony-124	U	2.44	+/-12.2	25.4		pCi/L					
Antimony-125	U	0.209	+/-10.7	19.0		pCi/L					
Barium-133	U	-2.7	+/-5.89	8.66		pCi/L					
Barium-140	U	-9.49	+/-14.0	24.7		pCi/L					
Beryllium-7	U	-6.23	+/-39.3	72.3		pCi/L					
Bismuth-212	U	-60.8	+/-69.4	99.6		pCi/L					
Bismuth-214	U	-6.08	+/-13.0	18.1		pCi/L					
Cerium-139	U	-1.56	+/-3.08	5.46		pCi/L					
Cerium-141	U	2.90	+/-6.92	12.1		pCi/L					
Cerium-144	U	15.3	+/-16.2	36.1		pCi/L					
Cesium-134	U	-2.13	+/-3.91	6.76		pCi/L					
Cesium-136	U	-1.37	+/-13.3	25.1		pCi/L					
Cesium-137	U	-3.77	+/-5.91	8.13	10.0	pCi/L					
Chromium-51	U	4.51	+/-45.1	81.1		pCi/L					
Cobalt-56	U	0.358	+/-5.11	9.43		pCi/L					
Cobalt-57	U	2.20	+/-2.26	4.60		pCi/L					
Cobalt-58	U	2.38	+/-4.45	8.67		pCi/L					
Cobalt-60	U	-1.65	+/-5.73	10.3		pCi/L					
Europium-152	U	0.239	+/-11.6	20.6		pCi/L					
Europium-154	U	-14	+/-13.6	21.5		pCi/L					
Europium-155	U	6.87	+/-11.0	19.7		pCi/L					
Iridium-192	U	-4.85	+/-4.95	7.30		pCi/L					
Iron-59	U	5.10	+/-9.73	20.1		pCi/L					
Lead-210	U	149	+/-359	557		pCi/L					
Lead-212	U	-3.73	+/-8.77	13.9		pCi/L					
Lead-214	U	5.60	+/-15.6	15.5		pCi/L					
Manganese-54	U	1.08	+/-3.59	7.02		pCi/L					
Mercury-203	U	1.87	+/-4.58	8.41		pCi/L					
Neodymium-147	U	3.53	+/-77.3	144		pCi/L					
Neptunium-239	U	0.264	+/-28.8	49.5		pCi/L					
Niobium-94	U	0.888	+/-4.50	7.40		pCi/L					
Niobium-95	U	-2.58	+/-4.76	8.20		pCi/L					
Potassium-40	U	-31.9	+/-72.6	111		pCi/L					
Promethium-144	U	-1.75	+/-4.03	7.07		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.16	+/-4.70	8.58	pCi/L
Radium-228	U	2.98	+/-22.0	35.7	pCi/L
Ruthenium-106	U	-0.409	+/-34.7	64.7	pCi/L
Silver-110m	U	3.18	+/-3.75	7.10	pCi/L
Sodium-22	U	-5.04	+/-4.79	7.55	pCi/L
Thallium-208	U	-3.04	+/-5.85	8.99	pCi/L
Thorium-230	U	249	+/-1020	1640	pCi/L
Thorium-234	U	14.1	+/-199	202	pCi/L
Tin-113	U	-2.89	+/-5.88	9.95	pCi/L
Uranium-235	U	-17.3	+/-25.8	37.4	pCi/L
Uranium-238	U	14.1	+/-199	202	pCi/L
Yttrium-88	U	-0.712	+/-5.45	10.7	pCi/L
Zinc-65	U	-3.47	+/-10.6	19.1	pCi/L
Zirconium-95	U	8.80	+/-8.35	17.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.94	+/-2.78	4.79	5.00	pCi/L	JAOC	11/06/13	2127	1341307	2
Beta		140	+/-7.32	2.88	5.00	pCi/L					
Alpha	U	2.56	+/-2.99	4.97	5.00	pCi/L	JAOC	11/11/13	1704	1341307	3
Beta		137	+/-7.93	3.21	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.8	+/-137	234	300	pCi/L	MYM1	11/05/13	0108	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 335887005

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 14	Project:	WNUC00124
Sample ID:	335887006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 14:05		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.30	+/-23.1	34.3		pCi/L					
Americium-241	U	16.2	+/-20.8	39.1		pCi/L					
Antimony-124	U	11.4	+/-11.3	24.5		pCi/L					
Antimony-125	U	-1.07	+/-10.6	18.5		pCi/L					
Barium-133	U	-3.71	+/-5.24	7.55		pCi/L					
Barium-140	U	-0.0842	+/-13.1	24.7		pCi/L					
Beryllium-7	U	-3.02	+/-35.3	61.4		pCi/L					
Bismuth-212	U	-58.1	+/-69.5	95.0		pCi/L					
Bismuth-214	U	13.7	+/-12.1	14.2		pCi/L					
Cerium-139	U	-2.05	+/-3.68	5.38		pCi/L					
Cerium-141	U	3.41	+/-7.72	13.6		pCi/L					
Cerium-144	U	7.57	+/-23.8	41.8		pCi/L					
Cesium-134	U	-1.21	+/-4.90	8.55		pCi/L					
Cesium-136	U	-0.205	+/-13.9	25.6		pCi/L					
Cesium-137	U	3.52	+/-5.32	8.85	10.0	pCi/L					
Chromium-51	U	34.0	+/-46.8	86.7		pCi/L					
Cobalt-56	U	-1.22	+/-4.43	7.71		pCi/L					
Cobalt-57	U	2.21	+/-2.86	5.18		pCi/L					
Cobalt-58	U	-0.756	+/-4.52	7.97		pCi/L					
Cobalt-60	U	4.65	+/-4.37	9.12		pCi/L					
Europium-152	U	-12.8	+/-12.3	18.4		pCi/L					
Europium-154	U	0.384	+/-12.7	23.5		pCi/L					
Europium-155	U	1.20	+/-12.1	21.4		pCi/L					
Iridium-192	U	-2.41	+/-4.16	7.12		pCi/L					
Iron-59	U	-0.222	+/-10.6	19.5		pCi/L					
Lead-210	U	959	+/-1010	1070		pCi/L					
Lead-212	U	8.79	+/-9.08	14.1		pCi/L					
Lead-214	U	4.44	+/-16.3	17.5		pCi/L					
Manganese-54	U	-0.54	+/-4.16	7.34		pCi/L					
Mercury-203	U	0.605	+/-5.05	8.03		pCi/L					
Neodymium-147	U	-31.9	+/-77.5	137		pCi/L					
Neptunium-239	U	-6.34	+/-31.2	54.1		pCi/L					
Niobium-94	U	-2.6	+/-3.55	5.97		pCi/L					
Niobium-95	U	-4.19	+/-5.76	8.99		pCi/L					
Potassium-40	U	21.6	+/-86.7	76.2		pCi/L					
Promethium-144	U	1.60	+/-3.73	7.00		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 14 Project: WNUC00124  
Sample ID: 335887006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.864	+/-5.04	8.68	pCi/L
Radium-228	U	2.30	+/-23.1	34.3	pCi/L
Ruthenium-106	U	13.5	+/-35.4	66.3	pCi/L
Silver-110m	U	-3.21	+/-4.03	6.77	pCi/L
Sodium-22	U	0.0498	+/-4.48	8.26	pCi/L
Thallium-208	UI	0.00	+/-8.30	6.56	pCi/L
Thorium-230	U	-844	+/-1530	2400	pCi/L
Thorium-234	U	-185	+/-260	402	pCi/L
Tin-113	U	-1.94	+/-5.29	9.06	pCi/L
Uranium-235	U	-7.56	+/-28.2	43.6	pCi/L
Uranium-238	U	-185	+/-260	402	pCi/L
Yttrium-88	U	-5.13	+/-4.50	6.73	pCi/L
Zinc-65	U	3.67	+/-10.4	17.3	pCi/L
Zirconium-95	U	2.18	+/-8.25	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.972	+/-2.00	4.85	5.00	pCi/L	JAOC	11/06/13	2146	1341307	2
Beta		28.6	+/-4.10	3.09	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-62.6	+/-128	229	300	pCi/L	MYM1	11/05/13	0124	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	335887007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 13:21		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.38	+/-19.5	26.3		pCi/L		RXF2	11/01/13	1210 1341420	1
Americium-241	U	-3.12	+/-23.8	38.4		pCi/L					
Antimony-124	U	-6.53	+/-9.04	15.3		pCi/L					
Antimony-125	U	-0.612	+/-8.40	15.1		pCi/L					
Barium-133	U	-0.441	+/-4.39	7.88		pCi/L					
Barium-140	U	0.229	+/-10.1	19.7		pCi/L					
Beryllium-7	U	-4.32	+/-31.9	56.8		pCi/L					
Bismuth-212	U	29.5	+/-47.5	85.1		pCi/L					
Bismuth-214	U	-7.11	+/-8.42	13.2		pCi/L					
Cerium-139	U	3.59	+/-3.11	5.30		pCi/L					
Cerium-141	U	2.94	+/-7.01	11.3		pCi/L					
Cerium-144	U	6.47	+/-19.2	34.4		pCi/L					
Cesium-134	U	3.97	+/-3.30	6.70		pCi/L					
Cesium-136	U	9.42	+/-10.9	22.3		pCi/L					
Cesium-137	U	-0.527	+/-3.39	5.94	10.0	pCi/L					
Chromium-51	U	3.49	+/-36.8	67.7		pCi/L					
Cobalt-56	U	-2.27	+/-4.18	7.31		pCi/L					
Cobalt-57	U	0.0886	+/-2.42	4.29		pCi/L					
Cobalt-58	U	-1.45	+/-3.71	5.68		pCi/L					
Cobalt-60	U	-1.07	+/-3.71	6.88		pCi/L					
Europium-152	U	2.79	+/-9.11	17.0		pCi/L					
Europium-154	U	5.05	+/-9.84	19.7		pCi/L					
Europium-155	U	-0.555	+/-10.5	18.5		pCi/L					
Iridium-192	U	0.151	+/-3.20	5.88		pCi/L					
Iron-59	U	-2.73	+/-7.79	13.8		pCi/L					
Lead-210	U	205	+/-775	1350		pCi/L					
Lead-212	U	-0.208	+/-7.04	11.8		pCi/L					
Lead-214	U	-14.5	+/-9.43	13.6		pCi/L					
Manganese-54	U	-0.0884	+/-3.15	5.88		pCi/L					
Mercury-203	U	-2.96	+/-4.74	6.82		pCi/L					
Neodymium-147	U	24.3	+/-53.0	102		pCi/L					
Neptunium-239	U	-7.64	+/-27.4	42.4		pCi/L					
Niobium-94	U	1.82	+/-3.09	6.06		pCi/L					
Niobium-95	U	3.54	+/-6.44	6.89		pCi/L					
Potassium-40	U	15.2	+/-49.9	52.9		pCi/L					
Promethium-144	U	-8.83	+/-6.55	5.94		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	335887007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.05	+/-3.89	6.86	pCi/L
Radium-228	U	7.38	+/-19.5	26.3	pCi/L
Ruthenium-106	U	-36.4	+/-33.1	52.0	pCi/L
Silver-110m	U	1.99	+/-3.09	5.92	pCi/L
Sodium-22	U	1.73	+/-3.47	6.93	pCi/L
Thallium-208	U	-1.81	+/-4.29	6.83	pCi/L
Thorium-230	U	1480	+/-2220	2350	pCi/L
Thorium-234	U	-62.1	+/-239	392	pCi/L
Tin-113	U	-2.72	+/-4.28	7.36	pCi/L
Uranium-235	U	6.58	+/-25.7	36.2	pCi/L
Uranium-238	U	-62.1	+/-239	392	pCi/L
Yttrium-88	U	-1.14	+/-4.49	8.26	pCi/L
Zinc-65	U	-1.18	+/-11.7	12.0	pCi/L
Zirconium-95	U	-1.67	+/-6.57	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.365	+/-2.34	4.77	5.00	pCi/L	JAOC	11/06/13	2201	1341307	2
Beta		268	+/-12.3	3.33	5.00	pCi/L					
Alpha	U	-0.691	+/-2.56	4.90	5.00	pCi/L	JAOC	11/11/13	1650	1341307	3
Beta		256	+/-7.78	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	261	+/-147	238	300	pCi/L	MYM1	11/05/13	0141	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 335887007

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 335887008  
Matrix: Ground Water  
Collect Date: 14-OCT-13 14:20  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.37	+/-25.8	29.6		pCi/L		RXF2	11/01/13	1210 1341420	1
Americium-241	U	-20	+/-27.2	47.0		pCi/L					
Antimony-124	U	-12.4	+/-9.84	13.9		pCi/L					
Antimony-125	U	-9.6	+/-9.67	15.8		pCi/L					
Barium-133	U	7.52	+/-6.72	8.03		pCi/L					
Barium-140	U	9.86	+/-11.7	25.8		pCi/L					
Beryllium-7	U	-29.2	+/-34.3	56.5		pCi/L					
Bismuth-212	U	27.2	+/-43.0	88.1		pCi/L					
Bismuth-214	U	6.66	+/-11.2	16.5		pCi/L					
Cerium-139	U	0.430	+/-3.07	5.36		pCi/L					
Cerium-141	U	5.24	+/-7.81	11.8		pCi/L					
Cerium-144	U	-12.2	+/-20.3	34.1		pCi/L					
Cesium-134	U	2.34	+/-3.68	7.48		pCi/L					
Cesium-136	U	9.79	+/-7.86	25.9		pCi/L					
Cesium-137	U	3.77	+/-4.40	6.84	10.0	pCi/L					
Chromium-51	U	28.3	+/-38.3	68.6		pCi/L					
Cobalt-56	U	0.618	+/-3.93	7.53		pCi/L					
Cobalt-57	U	0.675	+/-2.59	4.63		pCi/L					
Cobalt-58	U	0.491	+/-3.81	7.30		pCi/L					
Cobalt-60	U	0.647	+/-4.46	7.77		pCi/L					
Europium-152	U	3.01	+/-10.9	20.0		pCi/L					
Europium-154	U	-8.66	+/-9.73	16.4		pCi/L					
Europium-155	U	3.56	+/-10.6	19.2		pCi/L					
Iridium-192	U	-0.382	+/-4.49	7.11		pCi/L					
Iron-59	U	8.48	+/-6.79	15.9		pCi/L					
Lead-210	U	411	+/-1220	2280		pCi/L					
Lead-212	U	2.59	+/-8.04	12.0		pCi/L					
Lead-214	U	5.88	+/-11.2	17.0		pCi/L					
Manganese-54	U	-0.00168	+/-3.67	6.86		pCi/L					
Mercury-203	U	4.29	+/-4.05	7.91		pCi/L					
Neodymium-147	U	21.0	+/-64.5	121		pCi/L					
Neptunium-239	U	-20.7	+/-27.8	46.5		pCi/L					
Niobium-94	U	3.12	+/-3.47	7.02		pCi/L					
Niobium-95	U	0.444	+/-4.03	6.81		pCi/L					
Potassium-40	U	9.45	+/-52.6	95.9		pCi/L					
Promethium-144	U	0.0607	+/-3.73	6.95		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 16 Project: WNUC00124  
Sample ID: 335887008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.683	+/-4.38	8.02	pCi/L
Radium-228	U	5.37	+/-25.8	29.6	pCi/L
Ruthenium-106	U	2.95	+/-31.9	57.9	pCi/L
Silver-110m	U	-0.795	+/-3.63	5.80	pCi/L
Sodium-22	U	-3.32	+/-3.51	5.84	pCi/L
Thallium-208	U	0.798	+/-4.68	7.88	pCi/L
Thorium-230	U	-1000	+/-1760	2580	pCi/L
Thorium-234	U	-48.7	+/-271	431	pCi/L
Tin-113	U	-1.6	+/-4.94	8.68	pCi/L
Uranium-235	U	33.3	+/-23.6	34.2	pCi/L
Uranium-238	U	-48.7	+/-271	431	pCi/L
Yttrium-88	U	2.29	+/-3.37	8.09	pCi/L
Zinc-65	U	-3.08	+/-8.23	14.5	pCi/L
Zirconium-95	U	-1.52	+/-5.55	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.321	+/-2.37	4.67	5.00	pCi/L	JAOC	11/06/13	2147	1341307	2
Beta		16.1	+/-3.45	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-65.5	+/-127	228	300	pCi/L	MYM1	11/05/13	0157	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 335887009  
Matrix: Ground Water  
Collect Date: 15-OCT-13 10:17  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.59	+/-18.2	35.1		pCi/L		RXF2	11/01/13	1211 1341420	1
Americium-241	U	-13.7	+/-24.2	36.8		pCi/L					
Antimony-124	U	-2.85	+/-11.8	22.1		pCi/L					
Antimony-125	U	-3.32	+/-11.5	19.6		pCi/L					
Barium-133	U	2.81	+/-7.65	9.08		pCi/L					
Barium-140	U	-6.49	+/-12.0	21.5		pCi/L					
Beryllium-7	U	-5.68	+/-38.6	70.4		pCi/L					
Bismuth-212	U	-7.21	+/-59.9	107		pCi/L					
Bismuth-214	U	6.91	+/-14.0	12.3		pCi/L					
Cerium-139	U	-0.715	+/-3.67	6.56		pCi/L					
Cerium-141	U	1.17	+/-9.45	14.3		pCi/L					
Cerium-144	U	-11.9	+/-25.9	43.0		pCi/L					
Cesium-134	U	2.64	+/-4.97	7.23		pCi/L					
Cesium-136	U	0.533	+/-12.0	22.8		pCi/L					
Cesium-137	U	-0.162	+/-4.41	7.99	10.0	pCi/L					
Chromium-51	U	-13.6	+/-51.8	89.7		pCi/L					
Cobalt-56	U	-2.23	+/-4.17	7.09		pCi/L					
Cobalt-57	U	0.524	+/-3.32	5.72		pCi/L					
Cobalt-58	U	-0.276	+/-4.36	7.89		pCi/L					
Cobalt-60	U	1.62	+/-4.20	7.61		pCi/L					
Europium-152	U	6.67	+/-16.6	23.2		pCi/L					
Europium-154	U	4.43	+/-13.0	25.5		pCi/L					
Europium-155	U	-2.78	+/-12.8	21.8		pCi/L					
Iridium-192	U	-2.24	+/-4.79	8.17		pCi/L					
Iron-59	U	0.371	+/-9.27	17.6		pCi/L					
Lead-210	U	-693	+/-660	1110		pCi/L					
Lead-212	U	11.9	+/-11.9	12.5		pCi/L					
Lead-214	U	10.3	+/-13.4	18.4		pCi/L					
Manganese-54	U	2.02	+/-5.27	8.61		pCi/L					
Mercury-203	U	-1.76	+/-5.01	8.68		pCi/L					
Neodymium-147	U	62.4	+/-78.1	152		pCi/L					
Neptunium-239	U	27.7	+/-34.4	61.3		pCi/L					
Niobium-94	U	-4.0	+/-3.74	6.03		pCi/L					
Niobium-95	U	2.30	+/-6.51	7.79		pCi/L					
Potassium-40	U	17.0	+/-52.2	83.8		pCi/L					
Promethium-144	U	3.68	+/-4.51	8.66		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 17 Project: WNUC00124  
Sample ID: 335887009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.650	+/-5.49	9.65	pCi/L
Radium-228	U	7.59	+/-18.2	35.1	pCi/L
Ruthenium-106	U	14.6	+/-36.3	68.8	pCi/L
Silver-110m	U	0.323	+/-3.69	6.84	pCi/L
Sodium-22	U	1.42	+/-4.58	8.94	pCi/L
Thallium-208	U	-0.301	+/-5.16	8.54	pCi/L
Thorium-230	U	-1660	+/-1650	2550	pCi/L
Thorium-234	U	87.8	+/-234	357	pCi/L
Tin-113	U	-2.41	+/-5.56	9.42	pCi/L
Uranium-235	U	17.8	+/-39.1	45.7	pCi/L
Uranium-238	U	87.8	+/-234	357	pCi/L
Yttrium-88	U	4.62	+/-4.32	10.1	pCi/L
Zinc-65	U	3.89	+/-9.76	17.0	pCi/L
Zirconium-95	U	-1.11	+/-7.06	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.8	+/-6.07	4.55	5.00	pCi/L	JAOC	11/06/13	2146	1341307	2
Beta	372	+/-14.4	3.56	5.00	pCi/L					
Alpha	U 3.19	+/-3.35	4.98	5.00	pCi/L	JAOC	11/12/13	1523	1341307	3
Beta	374	+/-12.2	2.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	471	+/-152	231	300	pCi/L	MYM1	11/05/13	0213	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID: WELL 17  
Sample ID: 335887009

Project: WNUC00124  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	335887010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 09:46		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		3.81	+/-1.03	0.456	1.00	pCi/L		HAKB	11/18/13	1046 1346857	1
Uranium-235/236	U	0.407	+/-0.414	0.410	1.00	pCi/L					
Uranium-238		1.99	+/-0.744	0.332	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.03	+/-22.1	24.0		pCi/L		RXF2	11/01/13	1211 1341420	2
Americium-241	U	19.8	+/-27.7	45.3		pCi/L					
Antimony-124	U	-1.53	+/-10.8	20.6		pCi/L					
Antimony-125	U	-1.91	+/-9.56	17.3		pCi/L					
Barium-133	U	-0.26	+/-5.51	8.34		pCi/L					
Barium-140	U	3.84	+/-12.1	22.8		pCi/L					
Beryllium-7	U	-6.12	+/-38.5	69.3		pCi/L					
Bismuth-212	U	42.8	+/-73.4	99.8		pCi/L					
Bismuth-214	U	5.66	+/-14.2	16.2		pCi/L					
Cerium-139	U	0.0846	+/-3.70	6.60		pCi/L					
Cerium-141	U	-0.183	+/-7.77	13.5		pCi/L					
Cerium-144	U	-0.0863	+/-23.5	42.2		pCi/L					
Cesium-134	U	0.882	+/-4.33	7.79		pCi/L					
Cesium-136	U	-10.4	+/-12.4	20.7		pCi/L					
Cesium-137	U	-1.21	+/-3.95	6.93	10.0	pCi/L					
Chromium-51	U	20.2	+/-49.4	88.5		pCi/L					
Cobalt-56	U	0.985	+/-5.09	9.57		pCi/L					
Cobalt-57	U	0.679	+/-2.99	5.46		pCi/L					
Cobalt-58	U	-1.89	+/-4.28	7.29		pCi/L					
Cobalt-60	U	-0.851	+/-3.95	7.19		pCi/L					
Europium-152	U	-0.573	+/-12.6	19.1		pCi/L					
Europium-154	U	0.251	+/-14.7	23.5		pCi/L					
Europium-155	U	-3.17	+/-13.3	22.2		pCi/L					
Iridium-192	U	-1.32	+/-4.59	7.82		pCi/L					
Iron-59	U	-0.989	+/-9.31	17.2		pCi/L					
Lead-210	U	-402	+/-870	1490		pCi/L					
Lead-212	U	-1.27	+/-9.41	15.5		pCi/L					
Lead-214	U	2.09	+/-12.1	16.3		pCi/L					
Manganese-54	U	-2.87	+/-3.87	6.68		pCi/L					
Mercury-203	U	1.87	+/-4.92	8.80		pCi/L					
Neodymium-147	U	-10.4	+/-77.7	129		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	335887010	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	-22.7	+/-31.3	54.6	pCi/L
Niobium-94	U	6.04	+/-4.63	7.12	pCi/L
Niobium-95	U	-5.64	+/-4.45	6.78	pCi/L
Potassium-40	U	-0.886	+/-61.0	111	pCi/L
Promethium-144	U	2.80	+/-4.68	7.79	pCi/L
Promethium-146	U	2.73	+/-4.63	8.87	pCi/L
Radium-228	U	3.03	+/-22.1	24.0	pCi/L
Ruthenium-106	U	-7.37	+/-33.2	58.9	pCi/L
Silver-110m	U	1.57	+/-3.67	6.95	pCi/L
Sodium-22	U	0.224	+/-5.23	8.37	pCi/L
Thallium-208	U	3.75	+/-6.96	7.07	pCi/L
Thorium-230	U	2080	+/-1690	2870	pCi/L
Thorium-234	U	304	+/-362	332	pCi/L
Tin-113	U	1.50	+/-5.04	9.44	pCi/L
Uranium-235	U	-1.78	+/-29.8	43.0	pCi/L
Uranium-238	U	304	+/-362	332	pCi/L
Yttrium-88	U	-3.67	+/-4.54	7.45	pCi/L
Zinc-65	U	2.70	+/-8.89	15.7	pCi/L
Zirconium-95	U	-3.91	+/-7.82	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.6	+/-7.29	11.0	5.00	pCi/L	JAOC	11/06/13	2003	1341307	3
Beta	235	+/-8.75	5.26	5.00	pCi/L					
Alpha	19.9	+/-9.52	14.8	5.00	pCi/L	JAOC	11/12/13	1838	1341307	4
Beta	248	+/-9.08	5.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	226	+/-143	233	300	pCi/L	MYM1	11/05/13	0229	1341885	5
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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 335887010  
Project: WNUC00124  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			81.0	(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).



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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	335887011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 10:36		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-13.7	25.0		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	13.4	+/-19.7	37.7		pCi/L					
Antimony-124	U	0.136	+/-8.17	16.2		pCi/L					
Antimony-125	U	-1.49	+/-8.39	15.0		pCi/L					
Barium-133	U	-3.86	+/-4.64	6.81		pCi/L					
Barium-140	U	5.19	+/-9.04	19.1		pCi/L					
Beryllium-7	U	3.14	+/-28.8	52.9		pCi/L					
Bismuth-212	U	-39.3	+/-51.1	81.1		pCi/L					
Bismuth-214	U	6.29	+/-11.7	15.4		pCi/L					
Cerium-139	U	-1.73	+/-2.97	5.02		pCi/L					
Cerium-141	U	2.96	+/-9.10	10.3		pCi/L					
Cerium-144	U	8.39	+/-19.2	34.9		pCi/L					
Cesium-134	U	0.446	+/-3.92	6.53		pCi/L					
Cesium-136	U	0.109	+/-9.81	18.3		pCi/L					
Cesium-137	U	0.585	+/-3.39	6.17	10.0	pCi/L					
Chromium-51	U	35.7	+/-37.1	72.0		pCi/L					
Cobalt-56	U	3.20	+/-3.91	7.81		pCi/L					
Cobalt-57	U	-0.0871	+/-2.46	4.37		pCi/L					
Cobalt-58	U	0.817	+/-3.58	6.86		pCi/L					
Cobalt-60	U	-0.774	+/-3.02	5.72		pCi/L					
Europium-152	U	-2.0	+/-8.66	15.6		pCi/L					
Europium-154	U	-2.36	+/-10.5	19.3		pCi/L					
Europium-155	U	9.46	+/-10.7	20.0		pCi/L					
Iridium-192	U	-1.31	+/-3.22	5.76		pCi/L					
Iron-59	U	-3.41	+/-8.77	13.0		pCi/L					
Lead-210	U	-314	+/-843	1260		pCi/L					
Lead-212	U	-0.589	+/-7.48	11.2		pCi/L					
Lead-214	U	4.77	+/-11.5	14.9		pCi/L					
Manganese-54	U	-1.09	+/-3.26	5.87		pCi/L					
Mercury-203	U	-2.78	+/-3.60	5.80		pCi/L					
Neodymium-147	U	-6.94	+/-56.8	101		pCi/L					
Neptunium-239	U	3.17	+/-25.9	46.6		pCi/L					
Niobium-94	U	-1.72	+/-3.23	5.74		pCi/L					
Niobium-95	U	0.960	+/-3.34	6.48		pCi/L					
Potassium-40	U	-4.39	+/-49.0	87.7		pCi/L					
Promethium-144	U	-1.91	+/-3.42	6.06		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 20  
Sample ID: 335887011

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.189	+/-4.43	7.03	pCi/L
Radium-228	U	12.9	+/-13.7	25.0	pCi/L
Ruthenium-106	U	0.238	+/-30.0	53.6	pCi/L
Silver-110m	U	-0.782	+/-2.72	4.75	pCi/L
Sodium-22	U	-0.541	+/-3.66	6.82	pCi/L
Thallium-208	U	1.50	+/-4.56	5.32	pCi/L
Thorium-230	U	335	+/-1700	1970	pCi/L
Thorium-234	U	-49.1	+/-208	353	pCi/L
Tin-113	U	5.60	+/-4.42	8.74	pCi/L
Uranium-235	U	9.24	+/-28.4	32.0	pCi/L
Uranium-238	U	-49.1	+/-208	353	pCi/L
Yttrium-88	U	-1.78	+/-4.45	7.95	pCi/L
Zinc-65	U	0.876	+/-7.40	13.9	pCi/L
Zirconium-95	U	3.24	+/-6.15	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.438	+/-2.45	4.82	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	U	2.27	+/-2.19	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-45.8	+/-129	230	300	pCi/L	MYM1	11/05/13	0245	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	335887012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 09:21		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.62	+/-15.3	25.9		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	-8.98	+/-16.7	25.4		pCi/L					
Antimony-124	U	-4.01	+/-9.33	16.5		pCi/L					
Antimony-125	U	-3.35	+/-9.06	15.6		pCi/L					
Barium-133	U	-3.01	+/-4.93	7.22		pCi/L					
Barium-140	U	4.41	+/-9.23	17.4		pCi/L					
Beryllium-7	U	7.27	+/-33.2	59.8		pCi/L					
Bismuth-212	U	37.1	+/-53.1	94.4		pCi/L					
Bismuth-214	U	14.0	+/-12.9	16.7		pCi/L					
Cerium-139	U	-3.29	+/-3.14	5.01		pCi/L					
Cerium-141	U	2.95	+/-6.73	11.8		pCi/L					
Cerium-144	U	15.0	+/-19.6	35.1		pCi/L					
Cesium-134	U	-0.503	+/-3.88	6.38		pCi/L					
Cesium-136	U	-6.28	+/-11.3	19.2		pCi/L					
Cesium-137	U	0.950	+/-7.29	6.12	10.0	pCi/L					
Chromium-51	U	-18.3	+/-37.7	65.2		pCi/L					
Cobalt-56	U	-1.15	+/-3.92	6.95		pCi/L					
Cobalt-57	U	0.013	+/-2.50	4.33		pCi/L					
Cobalt-58	U	1.61	+/-3.74	7.16		pCi/L					
Cobalt-60	U	1.42	+/-3.62	7.23		pCi/L					
Europium-152	U	-9.21	+/-13.1	16.4		pCi/L					
Europium-154	U	7.92	+/-9.36	19.9		pCi/L					
Europium-155	U	3.61	+/-10.0	17.8		pCi/L					
Iridium-192	U	-0.367	+/-3.36	5.98		pCi/L					
Iron-59	U	0.790	+/-8.72	16.0		pCi/L					
Lead-210	U	-101	+/-430	640		pCi/L					
Lead-212	U	3.92	+/-8.62	10.0		pCi/L					
Lead-214	U	-4.26	+/-9.12	13.8		pCi/L					
Manganese-54	U	2.91	+/-3.60	6.11		pCi/L					
Mercury-203	U	-0.812	+/-3.89	6.90		pCi/L					
Neodymium-147	U	-28.4	+/-56.6	95.2		pCi/L					
Neptunium-239	U	-1.54	+/-28.5	46.1		pCi/L					
Niobium-94	U	-2.36	+/-2.99	5.10		pCi/L					
Niobium-95	U	2.98	+/-3.36	6.81		pCi/L					
Potassium-40	U	-26.3	+/-51.3	87.6		pCi/L					
Promethium-144	U	0.159	+/-3.21	5.94		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 22  
Sample ID: 335887012

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.31	+/-5.57	6.87	pCi/L
Radium-228	U	-2.62	+/-15.3	25.9	pCi/L
Ruthenium-106	U	-27.4	+/-37.2	54.3	pCi/L
Silver-110m	U	-4.59	+/-4.03	5.48	pCi/L
Sodium-22	U	2.76	+/-3.30	7.01	pCi/L
Thallium-208	U	-0.822	+/-3.91	6.92	pCi/L
Thorium-230	U	-426	+/-1170	1820	pCi/L
Thorium-234	U	-128	+/-155	264	pCi/L
Tin-113	U	0.936	+/-4.50	8.12	pCi/L
Uranium-235	U	7.01	+/-23.8	36.9	pCi/L
Uranium-238	U	-128	+/-155	264	pCi/L
Yttrium-88	U	-1.02	+/-3.37	6.21	pCi/L
Zinc-65	U	-5.7	+/-9.63	13.1	pCi/L
Zirconium-95	U	3.76	+/-6.34	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		8.13	+/-5.03	7.91	5.00	pCi/L	JAOC	11/06/13	2003	1341307	2
Beta		91.2	+/-4.33	2.81	5.00	pCi/L					
Alpha	U	7.46	+/-5.36	8.44	5.00	pCi/L	JAOC	11/11/13	1930	1341307	3
Beta		87.2	+/-4.71	4.49	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	156	+/-139	231	300	pCi/L	MYM1	11/05/13	0409	1341885	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 22  
Sample ID: 335887012

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 335887013  
Matrix: Ground Water  
Collect Date: 14-OCT-13 13:39  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.45	+/-17.3	22.3		pCi/L		RXF2	11/01/13	1212 1341420	1
Americium-241	U	-3.13	+/-15.6	25.3		pCi/L					
Antimony-124	U	-2.7	+/-9.74	17.9		pCi/L					
Antimony-125	U	-1.18	+/-8.93	15.9		pCi/L					
Barium-133	U	-0.584	+/-4.22	7.02		pCi/L					
Barium-140	U	-6.58	+/-11.5	20.0		pCi/L					
Beryllium-7	U	-6.64	+/-29.4	52.0		pCi/L					
Bismuth-212	U	7.38	+/-52.1	86.4		pCi/L					
Bismuth-214	U	4.00	+/-12.0	14.5		pCi/L					
Cerium-139	U	0.457	+/-2.92	5.14		pCi/L					
Cerium-141	U	6.89	+/-12.1	10.4		pCi/L					
Cerium-144	U	-12.4	+/-22.4	33.8		pCi/L					
Cesium-134	U	-0.54	+/-3.52	6.12		pCi/L					
Cesium-136	U	-11.8	+/-13.3	17.6		pCi/L					
Cesium-137	U	-2.24	+/-3.49	5.74	10.0	pCi/L					
Chromium-51	U	21.1	+/-38.5	72.6		pCi/L					
Cobalt-56	U	-3.61	+/-4.60	6.50		pCi/L					
Cobalt-57	U	0.412	+/-2.49	4.43		pCi/L					
Cobalt-58	U	1.15	+/-3.65	7.02		pCi/L					
Cobalt-60	U	3.81	+/-3.81	8.13		pCi/L					
Europium-152	U	-0.768	+/-8.92	16.1		pCi/L					
Europium-154	U	10.1	+/-9.81	19.4		pCi/L					
Europium-155	U	-4.94	+/-9.71	16.8		pCi/L					
Iridium-192	U	-0.0847	+/-3.46	6.29		pCi/L					
Iron-59	U	-4.53	+/-8.28	13.2		pCi/L					
Lead-210	U	-178	+/-469	683		pCi/L					
Lead-212	U	5.46	+/-7.68	11.6		pCi/L					
Lead-214	U	0.933	+/-10.4	13.9		pCi/L					
Manganese-54	U	-0.131	+/-3.22	5.97		pCi/L					
Mercury-203	U	1.09	+/-3.64	6.79		pCi/L					
Neodymium-147	U	-4.22	+/-66.9	119		pCi/L					
Neptunium-239	U	-3.61	+/-25.2	44.3		pCi/L					
Niobium-94	U	0.542	+/-3.78	6.21		pCi/L					
Niobium-95	U	0.534	+/-3.61	6.85		pCi/L					
Potassium-40	U	-23.5	+/-48.5	80.9		pCi/L					
Promethium-144	U	4.53	+/-3.52	7.16		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 335887013

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.93	+/-4.26	7.52	pCi/L
Radium-228	U	2.45	+/-17.3	22.3	pCi/L
Ruthenium-106	U	-26.4	+/-29.3	47.0	pCi/L
Silver-110m	U	-0.891	+/-3.10	5.34	pCi/L
Sodium-22	U	3.57	+/-3.47	5.18	pCi/L
Thallium-208	U	-4.47	+/-4.65	6.10	pCi/L
Thorium-230	U	1620	+/-1250	1650	pCi/L
Thorium-234	U	44.2	+/-204	260	pCi/L
Tin-113	U	0.592	+/-4.14	7.59	pCi/L
Uranium-235	U	20.7	+/-36.2	35.7	pCi/L
Uranium-238	U	44.2	+/-204	260	pCi/L
Yttrium-88	U	-2.81	+/-4.65	7.95	pCi/L
Zinc-65	U	1.98	+/-7.34	14.0	pCi/L
Zirconium-95	U	0.105	+/-6.62	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.92	+/-3.60	4.82	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	5.78	+/-2.23	2.98	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-33.8	+/-136	241	300	pCi/L	MYM1	11/05/13	0425	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 24	Project:	WNUC00124
Sample ID:	335887014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 11:16		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.7	+/-31.2	44.0		pCi/L		RXF2	11/01/13	1213 1341420	1
Americium-241	U	-0.263	+/-6.05	10.1		pCi/L					
Antimony-124	U	0.888	+/-12.9	25.5		pCi/L					
Antimony-125	U	-5.31	+/-11.4	17.2		pCi/L					
Barium-133	U	-5.01	+/-5.37	8.98		pCi/L					
Barium-140	U	6.74	+/-13.7	28.7		pCi/L					
Beryllium-7	U	25.1	+/-35.5	69.4		pCi/L					
Bismuth-212	U	-27.9	+/-68.4	111		pCi/L					
Bismuth-214	U	13.8	+/-14.7	14.4		pCi/L					
Cerium-139	U	-1.14	+/-3.32	5.09		pCi/L					
Cerium-141	U	1.09	+/-7.26	11.4		pCi/L					
Cerium-144	U	3.18	+/-19.1	34.3		pCi/L					
Cesium-134	U	1.46	+/-4.36	8.57		pCi/L					
Cesium-136	U	-3.84	+/-15.6	27.3		pCi/L					
Cesium-137	U	-0.305	+/-5.16	9.08	10.0	pCi/L					
Chromium-51	U	6.67	+/-42.7	79.4		pCi/L					
Cobalt-56	U	-1.42	+/-5.44	9.83		pCi/L					
Cobalt-57	U	0.296	+/-2.47	4.01		pCi/L					
Cobalt-58	U	-1.82	+/-5.09	9.17		pCi/L					
Cobalt-60	U	1.93	+/-5.25	10.5		pCi/L					
Europium-152	U	10.3	+/-11.7	20.6		pCi/L					
Europium-154	U	11.4	+/-19.9	27.1		pCi/L					
Europium-155	U	2.77	+/-8.41	15.5		pCi/L					
Iridium-192	U	-0.065	+/-3.63	6.71		pCi/L					
Iron-59	U	2.25	+/-11.7	22.0		pCi/L					
Lead-210	U	31.1	+/-108	103		pCi/L					
Lead-212	U	3.44	+/-10.8	14.0		pCi/L					
Lead-214	U	-7.93	+/-10.4	16.5		pCi/L					
Manganese-54	U	1.37	+/-3.95	7.77		pCi/L					
Mercury-203	U	-1.42	+/-4.60	7.71		pCi/L					
Neodymium-147	U	-48.5	+/-77.4	131		pCi/L					
Neptunium-239	U	-4.87	+/-23.0	40.9		pCi/L					
Niobium-94	U	0.203	+/-5.33	8.24		pCi/L					
Niobium-95	U	3.50	+/-5.02	10.0		pCi/L					
Potassium-40	U	57.0	+/-49.2	109		pCi/L					
Promethium-144	U	-1.64	+/-4.47	7.62		pCi/L					



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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 24 Project: WNUC00124  
Sample ID: 335887014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.03	+/-4.77	8.86	pCi/L
Radium-228	U	17.7	+/-31.2	44.0	pCi/L
Ruthenium-106	U	12.0	+/-38.0	70.7	pCi/L
Silver-110m	U	-3.39	+/-5.04	8.32	pCi/L
Sodium-22	U	6.11	+/-5.58	9.54	pCi/L
Thallium-208	U	-2.95	+/-6.47	9.59	pCi/L
Thorium-230	U	-707	+/-606	931	pCi/L
Thorium-234	U	-81	+/-83.4	132	pCi/L
Tin-113	U	-0.221	+/-4.68	8.58	pCi/L
Uranium-235	U	-18.9	+/-22.2	33.0	pCi/L
Uranium-238	U	-81	+/-83.4	132	pCi/L
Yttrium-88	U	-2.55	+/-6.94	12.8	pCi/L
Zinc-65	U	4.47	+/-9.30	18.5	pCi/L
Zirconium-95	U	2.56	+/-8.13	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.88	+/-3.30	4.66	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta	U	2.34	+/-2.41	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-13.5	+/-134	236	300	pCi/L	MYM1	11/05/13	0441	1341885	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 26	Project:	WNUC00124
Sample ID:	335887015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 10:23		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		32.8	+/-20.1	20.6		pCi/L		RXF2	11/01/13	1214 1341420	1
Americium-241	U	-3.51	+/-13.1	19.6		pCi/L					
Antimony-124	U	-3.78	+/-8.28	14.7		pCi/L					
Antimony-125	U	2.34	+/-8.16	14.7		pCi/L					
Barium-133	U	-5.14	+/-4.01	6.34		pCi/L					
Barium-140	U	-5.16	+/-9.21	16.1		pCi/L					
Beryllium-7	U	7.89	+/-28.4	53.8		pCi/L					
Bismuth-212	U	-42.7	+/-47.7	69.9		pCi/L					
Bismuth-214	U	-3.14	+/-8.35	12.7		pCi/L					
Cerium-139	U	1.08	+/-2.68	4.89		pCi/L					
Cerium-141	U	5.15	+/-8.40	8.97		pCi/L					
Cerium-144	U	-1.33	+/-17.7	31.7		pCi/L					
Cesium-134	U	-2.1	+/-3.52	6.03		pCi/L					
Cesium-136	U	1.73	+/-10.2	19.1		pCi/L					
Cesium-137	U	0.955	+/-3.06	5.82	10.0	pCi/L					
Chromium-51	U	-23.7	+/-39.3	66.2		pCi/L					
Cobalt-56	U	0.0624	+/-3.65	6.50		pCi/L					
Cobalt-57	U	0.856	+/-2.12	3.90		pCi/L					
Cobalt-58	U	-1.18	+/-3.86	6.80		pCi/L					
Cobalt-60	U	-1.48	+/-3.09	5.53		pCi/L					
Europium-152	U	0.610	+/-8.36	14.8		pCi/L					
Europium-154	U	-0.23	+/-8.78	16.8		pCi/L					
Europium-155	U	-3.42	+/-10.2	16.1		pCi/L					
Iridium-192	U	5.97	+/-3.42	6.69		pCi/L					
Iron-59	U	-0.28	+/-7.55	13.7		pCi/L					
Lead-210	U	126	+/-343	366		pCi/L					
Lead-212	U	4.12	+/-7.01	10.1		pCi/L					
Lead-214	U	7.85	+/-8.54	14.3		pCi/L					
Manganese-54	U	0.173	+/-3.65	5.80		pCi/L					
Mercury-203	U	0.301	+/-3.44	6.12		pCi/L					
Neodymium-147	U	-17.7	+/-55.6	100		pCi/L					
Neptunium-239	U	1.55	+/-22.7	41.2		pCi/L					
Niobium-94	U	-1.7	+/-2.81	4.84		pCi/L					
Niobium-95	U	0.0512	+/-3.31	6.10		pCi/L					
Potassium-40	U	53.9	+/-46.4	65.7		pCi/L					
Promethium-144	U	2.27	+/-3.17	6.13		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 26

Sample ID: 335887015

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.53	+/-4.00	6.75	pCi/L
Radium-228		32.8	+/-20.1	20.6	pCi/L
Ruthenium-106	U	-16.3	+/-25.7	44.5	pCi/L
Silver-110m	U	-0.127	+/-3.04	5.57	pCi/L
Sodium-22	U	-0.623	+/-3.17	5.92	pCi/L
Thallium-208	U	-6.53	+/-4.10	6.26	pCi/L
Thorium-230	U	627	+/-1000	1510	pCi/L
Thorium-234	U	66.2	+/-145	177	pCi/L
Tin-113	U	0.0618	+/-3.80	6.73	pCi/L
Uranium-235	U	15.4	+/-25.1	33.2	pCi/L
Uranium-238	U	66.2	+/-145	177	pCi/L
Yttrium-88	U	0.134	+/-3.54	6.82	pCi/L
Zinc-65	U	3.59	+/-7.08	12.4	pCi/L
Zirconium-95	U	6.79	+/-5.84	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.86	+/-2.68	4.63	5.00	pCi/L	JAOC	11/10/13	1104	1341307	2
Beta		13.5	+/-3.41	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	24.1	+/-124	216	300	pCi/L	MYM1	11/06/13	0031	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 27	Project:	WNUC00124
Sample ID:	335887016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 10:15		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.0994	+/-17.5	27.1		pCi/L		RXF2	11/01/13	1214 1341420	1
Americium-241	U	-8.49	+/-19.2	28.9		pCi/L					
Antimony-124	U	0.768	+/-7.28	14.7		pCi/L					
Antimony-125	U	3.89	+/-8.22	15.2		pCi/L					
Barium-133	U	1.77	+/-4.35	7.09		pCi/L					
Barium-140	U	3.85	+/-8.35	16.7		pCi/L					
Beryllium-7	U	5.41	+/-31.9	57.3		pCi/L					
Bismuth-212	U	-48.3	+/-55.0	76.3		pCi/L					
Bismuth-214	U	0.772	+/-15.3	11.8		pCi/L					
Cerium-139	U	0.684	+/-3.05	5.21		pCi/L					
Cerium-141	U	5.29	+/-6.80	11.9		pCi/L					
Cerium-144	U	-3.94	+/-19.9	33.5		pCi/L					
Cesium-134	U	-0.283	+/-3.27	6.06		pCi/L					
Cesium-136	U	0.609	+/-9.25	17.3		pCi/L					
Cesium-137	U	1.67	+/-3.38	6.23	10.0	pCi/L					
Chromium-51	U	24.0	+/-37.3	69.1		pCi/L					
Cobalt-56	U	0.732	+/-3.57	6.73		pCi/L					
Cobalt-57	U	2.52	+/-2.67	4.75		pCi/L					
Cobalt-58	U	2.23	+/-3.17	6.32		pCi/L					
Cobalt-60	U	-0.18	+/-3.04	5.66		pCi/L					
Europium-152	U	2.34	+/-9.07	16.5		pCi/L					
Europium-154	U	-1.28	+/-9.60	17.5		pCi/L					
Europium-155	U	-5.96	+/-10.7	17.8		pCi/L					
Iridium-192	U	-1.38	+/-3.50	6.11		pCi/L					
Iron-59	U	3.76	+/-7.22	12.9		pCi/L					
Lead-210	U	558	+/-711	701		pCi/L					
Lead-212	U	-0.83	+/-7.48	11.3		pCi/L					
Lead-214	U	2.00	+/-11.5	13.6		pCi/L					
Manganese-54	U	-1.19	+/-3.73	5.76		pCi/L					
Mercury-203	U	-1.07	+/-3.58	6.31		pCi/L					
Neodymium-147	U	24.4	+/-54.0	99.8		pCi/L					
Neptunium-239	U	17.2	+/-27.0	47.5		pCi/L					
Niobium-94	U	-0.0204	+/-3.47	5.32		pCi/L					
Niobium-95	U	2.07	+/-3.87	7.04		pCi/L					
Potassium-40	U	7.28	+/-48.2	92.8		pCi/L					
Promethium-144	U	0.413	+/-3.60	5.59		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 27

Sample ID: 335887016

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.924	+/-3.99	6.74	pCi/L
Radium-228	U	-0.0994	+/-17.5	27.1	pCi/L
Ruthenium-106	UI	0.00	+/-55.9	49.1	pCi/L
Silver-110m	U	-3.18	+/-2.98	4.69	pCi/L
Sodium-22	U	-0.501	+/-3.38	6.15	pCi/L
Thallium-208	U	-2.01	+/-4.49	7.03	pCi/L
Thorium-230	U	-199	+/-1400	1990	pCi/L
Thorium-234	U	12.9	+/-247	293	pCi/L
Tin-113	U	-3.35	+/-3.95	6.61	pCi/L
Uranium-235	U	-36.6	+/-24.9	35.3	pCi/L
Uranium-238	U	12.9	+/-247	293	pCi/L
Yttrium-88	U	2.30	+/-3.67	7.26	pCi/L
Zinc-65	U	-3.46	+/-7.70	10.7	pCi/L
Zirconium-95	U	-0.206	+/-6.28	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.351	+/-2.49	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		12.5	+/-2.77	3.29	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-106	+/-117	216	300	pCi/L	MYM1	11/06/13	0047	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	335887017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 10:44		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		8.67	+/-1.49	0.429	1.00	pCi/L		HAKB	11/18/13	1046 1346857	1
Uranium-235/236		0.464	+/-0.421	0.386	1.00	pCi/L					
Uranium-238		2.28	+/-0.767	0.196	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.7	+/-28.9	23.7		pCi/L		RXF2	11/01/13	1312 1341420	2
Americium-241	U	8.10	+/-21.1	34.3		pCi/L					
Antimony-124	U	7.49	+/-9.24	20.2		pCi/L					
Antimony-125	U	-0.224	+/-11.5	20.6		pCi/L					
Barium-133	U	-0.769	+/-5.86	9.07		pCi/L					
Barium-140	U	7.35	+/-12.2	22.6		pCi/L					
Beryllium-7	U	25.4	+/-48.5	78.6		pCi/L					
Bismuth-212	U	21.0	+/-66.9	106		pCi/L					
Bismuth-214	U	5.92	+/-11.7	16.7		pCi/L					
Cerium-139	U	-2.26	+/-4.21	6.18		pCi/L					
Cerium-141	U	2.84	+/-10.8	14.1		pCi/L					
Cerium-144	U	4.67	+/-24.8	43.7		pCi/L					
Cesium-134	U	0.536	+/-4.90	8.48		pCi/L					
Cesium-136	U	0.524	+/-11.1	20.7		pCi/L					
Cesium-137	U	-0.293	+/-4.59	8.07	10.0	pCi/L					
Chromium-51	U	30.8	+/-49.6	91.9		pCi/L					
Cobalt-56	U	-0.446	+/-5.19	9.42		pCi/L					
Cobalt-57	U	-2.03	+/-3.25	5.54		pCi/L					
Cobalt-58	U	-3.91	+/-5.82	8.48		pCi/L					
Cobalt-60	U	-4.48	+/-4.99	6.44		pCi/L					
Europium-152	U	-7.65	+/-12.4	21.4		pCi/L					
Europium-154	U	12.6	+/-10.0	20.7		pCi/L					
Europium-155	U	-8.41	+/-12.8	21.8		pCi/L					
Iridium-192	U	0.410	+/-4.59	8.29		pCi/L					
Iron-59	U	9.45	+/-8.88	17.0		pCi/L					
Lead-210	U	-581	+/-604	895		pCi/L					
Lead-212	U	2.76	+/-9.81	13.9		pCi/L					
Lead-214	U	3.49	+/-13.5	17.5		pCi/L					
Manganese-54	U	-0.464	+/-4.39	7.98		pCi/L					
Mercury-203	U	0.323	+/-5.17	8.84		pCi/L					
Neodymium-147	U	-79.5	+/-76.1	125		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 28  
Sample ID: 335887017

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	23.0	+/-33.0	59.7	pCi/L
Niobium-94	U	-0.335	+/-3.89	6.82	pCi/L
Niobium-95	U	0.750	+/-4.68	8.38	pCi/L
Potassium-40	U	46.0	+/-57.2	64.0	pCi/L
Promethium-144	U	1.35	+/-4.47	8.03	pCi/L
Promethium-146	U	3.29	+/-5.42	10.0	pCi/L
Radium-228	U	19.7	+/-28.9	23.7	pCi/L
Ruthenium-106	U	-3.05	+/-43.8	66.6	pCi/L
Silver-110m	U	0.440	+/-4.46	7.93	pCi/L
Sodium-22	U	5.47	+/-3.25	7.32	pCi/L
Thallium-208	U	5.26	+/-8.04	7.07	pCi/L
Thorium-230	U	437	+/-1650	2320	pCi/L
Thorium-234	U	58.8	+/-261	281	pCi/L
Tin-113	U	0.806	+/-5.80	10.5	pCi/L
Uranium-235	U	8.66	+/-33.1	44.9	pCi/L
Uranium-238	U	58.8	+/-261	281	pCi/L
Yttrium-88	U	-0.642	+/-4.04	7.72	pCi/L
Zinc-65	U	-3.33	+/-9.22	13.8	pCi/L
Zirconium-95	U	-2.35	+/-8.31	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	18.7	+/-4.36	5.17	5.00	pCi/L	JAOC	11/06/13	2019	1341309	3
Beta	33.5	+/-3.87	5.21	5.00	pCi/L					
Alpha	17.3	+/-5.63	8.17	5.00	pCi/L	JAOC	11/12/13	1831	1341309	4
Beta	27.9	+/-2.90	3.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	43.3	+/-130	226	300	pCi/L	MYM1	11/06/13	0104	1341886	5
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# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	335887017	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			89.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	335887018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 08:47		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-19.0	27.3		pCi/L		RXF2	11/01/13	1312 1341420	1
Americium-241	U	9.52	+/-21.7	34.9		pCi/L					
Antimony-124	U	-2.99	+/-8.47	15.7		pCi/L					
Antimony-125	U	5.07	+/-8.76	16.7		pCi/L					
Barium-133	U	0.234	+/-4.62	7.10		pCi/L					
Barium-140	U	-6.76	+/-12.9	19.3		pCi/L					
Beryllium-7	U	34.8	+/-32.9	52.2		pCi/L					
Bismuth-212	U	26.9	+/-44.1	84.6		pCi/L					
Bismuth-214	U	11.9	+/-13.3	12.3		pCi/L					
Cerium-139	U	-1.15	+/-3.09	5.02		pCi/L					
Cerium-141	U	1.26	+/-8.83	11.4		pCi/L					
Cerium-144	U	-7.38	+/-19.1	33.8		pCi/L					
Cesium-134	U	0.270	+/-3.89	6.42		pCi/L					
Cesium-136	U	-0.467	+/-9.33	17.5		pCi/L					
Cesium-137	U	4.65	+/-5.81	5.46	10.0	pCi/L					
Chromium-51	U	29.5	+/-40.2	73.7		pCi/L					
Cobalt-56	U	-1.17	+/-4.57	7.07		pCi/L					
Cobalt-57	U	0.532	+/-2.68	4.58		pCi/L					
Cobalt-58	U	1.02	+/-4.04	6.81		pCi/L					
Cobalt-60	U	-0.551	+/-3.09	5.70		pCi/L					
Europium-152	U	13.6	+/-10.0	19.1		pCi/L					
Europium-154	U	1.25	+/-9.92	18.8		pCi/L					
Europium-155	U	0.743	+/-10.2	17.5		pCi/L					
Iridium-192	U	-2.9	+/-3.45	5.69		pCi/L					
Iron-59	U	-2.33	+/-7.33	13.3		pCi/L					
Lead-210	U	247	+/-1350	983		pCi/L					
Lead-212	U	0.176	+/-8.31	11.6		pCi/L					
Lead-214	U	1.39	+/-11.1	14.4		pCi/L					
Manganese-54	U	0.475	+/-3.00	5.53		pCi/L					
Mercury-203	U	2.92	+/-4.90	7.74		pCi/L					
Neodymium-147	U	49.7	+/-70.2	120		pCi/L					
Neptunium-239	U	12.2	+/-27.6	48.0		pCi/L					
Niobium-94	U	0.329	+/-3.29	5.96		pCi/L					
Niobium-95	U	-0.395	+/-4.30	6.35		pCi/L					
Potassium-40	U	4.56	+/-48.1	86.1		pCi/L					
Promethium-144	U	1.32	+/-3.33	6.18		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	335887018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.18	+/-3.83	7.20	pCi/L
Radium-228	UI	0.00	+/-19.0	27.3	pCi/L
Ruthenium-106	U	14.2	+/-27.9	53.3	pCi/L
Silver-110m	U	-0.086	+/-3.58	5.62	pCi/L
Sodium-22	U	1.06	+/-3.44	6.70	pCi/L
Thallium-208	U	-3.44	+/-4.99	6.53	pCi/L
Thorium-230	U	958	+/-1390	2250	pCi/L
Thorium-234	U	32.5	+/-251	296	pCi/L
Tin-113	U	0.431	+/-4.36	7.67	pCi/L
Uranium-235	U	3.83	+/-26.9	34.6	pCi/L
Uranium-238	U	32.5	+/-251	296	pCi/L
Yttrium-88	U	3.00	+/-3.75	8.26	pCi/L
Zinc-65	U	-0.138	+/-6.20	11.7	pCi/L
Zirconium-95	U	4.27	+/-6.18	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.94	+/-3.83	5.83	5.00	pCi/L	JAOC	11/06/13	2019	1341309	2
Beta	32.1	+/-2.84	2.87	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	76.9	+/-126	215	300	pCi/L	MYM1	11/06/13	0120	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 335887019  
Matrix: Ground Water  
Collect Date: 15-OCT-13 09:06  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		11.3	+/-1.58	0.418	1.00	pCi/L		HAKB	11/18/13	1046 1346857	1
Uranium-235/236	U	0.336	+/-0.371	0.490	1.00	pCi/L					
Uranium-238		3.28	+/-0.861	0.373	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	24.8	+/-18.2	33.9		pCi/L		RXF2	11/01/13	1706 1341420	2
Americium-241	U	-31.1	+/-29.3	48.1		pCi/L					
Antimony-124	U	5.63	+/-8.55	18.9		pCi/L					
Antimony-125	U	4.45	+/-8.76	16.4		pCi/L					
Barium-133	U	-3.02	+/-5.02	7.38		pCi/L					
Barium-140	U	1.89	+/-9.58	19.4		pCi/L					
Beryllium-7	U	23.0	+/-33.2	62.8		pCi/L					
Bismuth-212	U	-27.7	+/-47.7	83.9		pCi/L					
Bismuth-214	U	-12.4	+/-10.3	15.4		pCi/L					
Cerium-139	U	0.953	+/-3.76	5.75		pCi/L					
Cerium-141	U	-1.26	+/-8.54	13.1		pCi/L					
Cerium-144	U	-2.55	+/-23.5	39.7		pCi/L					
Cesium-134	U	-1.56	+/-3.29	5.85		pCi/L					
Cesium-136	U	-4.87	+/-10.4	18.2		pCi/L					
Cesium-137	U	0.0876	+/-3.36	6.31	10.0	pCi/L					
Chromium-51	U	-22	+/-40.5	69.9		pCi/L					
Cobalt-56	U	-2.3	+/-3.59	6.23		pCi/L					
Cobalt-57	U	0.908	+/-2.89	5.03		pCi/L					
Cobalt-58	U	-1.03	+/-3.43	6.23		pCi/L					
Cobalt-60	U	0.923	+/-3.18	6.34		pCi/L					
Europium-152	U	5.80	+/-10.1	18.8		pCi/L					
Europium-154	U	5.81	+/-10.7	19.5		pCi/L					
Europium-155	U	-2.97	+/-12.4	21.0		pCi/L					
Iridium-192	U	1.80	+/-3.62	6.72		pCi/L					
Iron-59	U	-0.368	+/-8.33	13.5		pCi/L					
Lead-210	U	89.1	+/-1220	2160		pCi/L					
Lead-212	U	4.73	+/-7.93	11.9		pCi/L					
Lead-214	U	5.97	+/-13.0	15.8		pCi/L					
Manganese-54	U	-2.02	+/-3.44	5.99		pCi/L					
Mercury-203	U	-3.13	+/-4.31	7.37		pCi/L					
Neodymium-147	U	45.1	+/-69.7	131		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 30  
Sample ID: 335887019

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	12.9	+/-30.3	53.2	pCi/L
Niobium-94	U	0.527	+/-3.28	6.17	pCi/L
Niobium-95	U	-0.623	+/-3.70	6.79	pCi/L
Potassium-40	U	31.1	+/-56.3	106	pCi/L
Promethium-144	U	1.82	+/-3.40	6.60	pCi/L
Promethium-146	U	-1.43	+/-4.14	7.17	pCi/L
Radium-228	U	24.8	+/-18.2	33.9	pCi/L
Ruthenium-106	U	-21.9	+/-34.0	56.0	pCi/L
Silver-110m	U	1.11	+/-3.06	5.95	pCi/L
Sodium-22	U	1.49	+/-3.90	6.87	pCi/L
Thallium-208	U	2.87	+/-4.48	7.94	pCi/L
Thorium-230	U	1370	+/-2420	2600	pCi/L
Thorium-234	U	-66.6	+/-308	434	pCi/L
Tin-113	U	2.71	+/-4.52	8.47	pCi/L
Uranium-235	U	-3.55	+/-28.2	39.8	pCi/L
Uranium-238	U	-66.6	+/-308	434	pCi/L
Yttrium-88	U	2.35	+/-2.61	8.80	pCi/L
Zinc-65	U	-2.43	+/-7.03	12.5	pCi/L
Zirconium-95	U	-1.27	+/-6.42	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	18.8	+/-3.81	4.39	5.00	pCi/L	JAOC	11/06/13	2006	1341309	3
Beta	53.7	+/-2.75	1.97	5.00	pCi/L					
Alpha	19.5	+/-13.1	19.0	5.00	pCi/L	JAOC	11/11/13	1526	1341309	4
Beta	61.8	+/-8.99	7.91	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	64.9	+/-125	213	300	pCi/L	MYM1	11/06/13	0136	1341886	5
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# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	335887019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			98.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	335887020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-OCT-13 13:25		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.4	+/-22.5	21.6		pCi/L		RXF2	11/01/13	1706 1341420	1
Americium-241	U	5.32	+/-21.9	36.6		pCi/L					
Antimony-124	U	7.08	+/-10.1	21.3		pCi/L					
Antimony-125	U	-2.26	+/-8.77	15.5		pCi/L					
Barium-133	U	-0.391	+/-4.40	6.97		pCi/L					
Barium-140	U	-3.55	+/-10.3	18.8		pCi/L					
Beryllium-7	UI	0.00	+/-40.8	50.6		pCi/L					
Bismuth-212	U	22.9	+/-46.7	82.5		pCi/L					
Bismuth-214	U	2.66	+/-9.36	16.2		pCi/L					
Cerium-139	U	-0.582	+/-3.13	4.78		pCi/L					
Cerium-141	U	-0.274	+/-6.55	11.4		pCi/L					
Cerium-144	U	-7.25	+/-20.0	34.3		pCi/L					
Cesium-134	U	-1.73	+/-3.63	6.45		pCi/L					
Cesium-136	U	14.7	+/-8.99	19.8		pCi/L					
Cesium-137	U	0.0714	+/-3.31	5.93	10.0	pCi/L					
Chromium-51	U	4.51	+/-40.0	73.1		pCi/L					
Cobalt-56	U	-1.73	+/-3.87	6.84		pCi/L					
Cobalt-57	U	-0.164	+/-2.45	4.31		pCi/L					
Cobalt-58	U	-0.861	+/-3.81	6.93		pCi/L					
Cobalt-60	U	1.93	+/-3.68	7.55		pCi/L					
Europium-152	U	-3.34	+/-9.13	15.6		pCi/L					
Europium-154	U	2.90	+/-9.49	18.6		pCi/L					
Europium-155	U	1.20	+/-9.88	17.7		pCi/L					
Iridium-192	U	0.198	+/-3.42	6.26		pCi/L					
Iron-59	U	10.9	+/-7.53	16.6		pCi/L					
Lead-210	U	-300	+/-800	1340		pCi/L					
Lead-212	U	6.54	+/-9.11	12.9		pCi/L					
Lead-214	U	7.73	+/-11.7	15.9		pCi/L					
Manganese-54	U	-0.874	+/-3.15	5.70		pCi/L					
Mercury-203	U	-3.64	+/-4.54	6.34		pCi/L					
Neodymium-147	U	85.7	+/-54.4	114		pCi/L					
Neptunium-239	U	-5.64	+/-25.5	44.4		pCi/L					
Niobium-94	U	1.80	+/-3.21	6.26		pCi/L					
Niobium-95	U	1.95	+/-3.65	7.17		pCi/L					
Potassium-40	U	15.1	+/-63.8	65.4		pCi/L					
Promethium-144	U	-8.47	+/-6.70	5.82		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32

Sample ID: 335887020

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.932	+/-4.01	7.08	pCi/L
Radium-228	U	12.4	+/-22.5	21.6	pCi/L
Ruthenium-106	U	14.2	+/-32.1	59.4	pCi/L
Silver-110m	U	-1.87	+/-3.09	5.12	pCi/L
Sodium-22	U	1.03	+/-3.35	6.56	pCi/L
Thallium-208	U	0.718	+/-4.42	7.45	pCi/L
Thorium-230	U	76.0	+/-1580	2410	pCi/L
Thorium-234	U	165	+/-310	413	pCi/L
Tin-113	U	-0.535	+/-4.36	7.81	pCi/L
Uranium-235	U	-6.72	+/-23.2	36.5	pCi/L
Uranium-238	U	165	+/-310	413	pCi/L
Yttrium-88	U	-2.29	+/-4.48	6.37	pCi/L
Zinc-65	U	-2.62	+/-8.97	13.5	pCi/L
Zirconium-95	U	-2.23	+/-6.27	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	14.7	+/-5.33	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	265	+/-8.93	2.47	5.00	pCi/L					
Alpha	13.5	+/-8.32	9.98	5.00	pCi/L	JAOC	11/11/13	1526	1341309	3
Beta	273	+/-14.2	4.86	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	532	+/-151	220	300	pCi/L	MYM1	11/06/13	0259	1341886	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID: WELL 32  
Sample ID: 335887020

Project: WNUC00124  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 335887021  
Matrix: Ground Water  
Collect Date: 14-OCT-13 11:37  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.32	+/-25.0	37.0		pCi/L		RXF2	11/01/13	1724 1341421	1
Americium-241	U	4.69	+/-6.05	10.6		pCi/L					
Antimony-124	U	1.69	+/-12.6	25.2		pCi/L					
Antimony-125	U	-3.91	+/-10.1	17.8		pCi/L					
Barium-133	U	0.412	+/-6.72	8.51		pCi/L					
Barium-140	U	4.88	+/-15.9	31.7		pCi/L					
Beryllium-7	U	39.2	+/-41.3	74.3		pCi/L					
Bismuth-212	U	-63.2	+/-67.0	107		pCi/L					
Bismuth-214	U	7.81	+/-13.0	20.7		pCi/L					
Cerium-139	U	-2.11	+/-2.98	5.03		pCi/L					
Cerium-141	U	-3.43	+/-7.29	11.0		pCi/L					
Cerium-144	U	24.9	+/-25.5	35.5		pCi/L					
Cesium-134	U	0.624	+/-5.41	10.2		pCi/L					
Cesium-136	U	-5.79	+/-14.8	26.2		pCi/L					
Cesium-137	U	2.84	+/-4.62	8.79	10.0	pCi/L					
Chromium-51	U	-7.48	+/-42.5	77.3		pCi/L					
Cobalt-56	U	0.809	+/-5.07	9.64		pCi/L					
Cobalt-57	U	3.37	+/-2.63	4.08		pCi/L					
Cobalt-58	U	3.11	+/-4.71	9.49		pCi/L					
Cobalt-60	U	0.927	+/-4.22	8.59		pCi/L					
Europium-152	U	3.13	+/-10.2	19.2		pCi/L					
Europium-154	U	11.5	+/-11.8	25.9		pCi/L					
Europium-155	U	5.77	+/-8.78	16.3		pCi/L					
Iridium-192	U	-1.54	+/-3.87	6.92		pCi/L					
Iron-59	U	3.42	+/-9.85	19.5		pCi/L					
Lead-210	U	93.0	+/-124	98.5		pCi/L					
Lead-212	U	2.65	+/-12.2	14.7		pCi/L					
Lead-214	U	3.12	+/-12.4	17.5		pCi/L					
Manganese-54	U	0.0126	+/-4.64	8.64		pCi/L					
Mercury-203	U	2.48	+/-4.94	7.94		pCi/L					
Neodymium-147	U	31.7	+/-75.2	143		pCi/L					
Neptunium-239	U	-14.1	+/-22.5	38.9		pCi/L					
Niobium-94	U	-1.45	+/-4.42	7.55		pCi/L					
Niobium-95	U	-4.44	+/-5.12	8.73		pCi/L					
Potassium-40	U	10.1	+/-56.6	77.0		pCi/L					
Promethium-144	U	1.11	+/-4.64	8.40		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 335887021

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.88	+/-4.86	9.28	pCi/L
Radium-228	U	-7.32	+/-25.0	37.0	pCi/L
Ruthenium-106	U	-19.3	+/-39.4	66.9	pCi/L
Silver-110m	U	-4.29	+/-4.57	7.30	pCi/L
Sodium-22	U	2.61	+/-4.41	9.08	pCi/L
Thallium-208	U	-4.27	+/-5.78	9.07	pCi/L
Thorium-230	U	246	+/-651	950	pCi/L
Thorium-234	U	-25.9	+/-88.8	138	pCi/L
Tin-113	U	-3.6	+/-4.86	8.36	pCi/L
Uranium-235	U	1.94	+/-23.1	33.5	pCi/L
Uranium-238	U	-25.9	+/-88.8	138	pCi/L
Yttrium-88	U	-7.5	+/-5.77	8.57	pCi/L
Zinc-65	U	9.93	+/-10.8	20.3	pCi/L
Zirconium-95	U	-8.78	+/-9.06	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.17	+/-2.98	4.78	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		9.44	+/-2.58	2.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-21.9	+/-120	214	300	pCi/L	MYM1	11/06/13	0315	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 38  
Sample ID: 335887022  
Matrix: Ground Water  
Collect Date: 14-OCT-13 09:00  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.1	+/-15.9	26.6		pCi/L		RXF2	11/02/13	1618 1341421	1
Americium-241	U	10.6	+/-11.0	18.2		pCi/L					
Antimony-124	U	2.85	+/-9.02	17.9		pCi/L					
Antimony-125	U	-6.89	+/-9.29	15.1		pCi/L					
Barium-133	U	-2.95	+/-4.23	6.98		pCi/L					
Barium-140	U	11.1	+/-9.57	21.3		pCi/L					
Beryllium-7	U	-9.49	+/-32.7	58.6		pCi/L					
Bismuth-212	U	72.1	+/-66.1	96.1		pCi/L					
Bismuth-214	U	-0.819	+/-9.86	15.1		pCi/L					
Cerium-139	U	1.10	+/-3.02	5.43		pCi/L					
Cerium-141	U	-0.698	+/-6.77	11.6		pCi/L					
Cerium-144	U	13.4	+/-19.6	34.8		pCi/L					
Cesium-134	U	-0.165	+/-3.59	6.31		pCi/L					
Cesium-136	U	-6.44	+/-11.9	21.1		pCi/L					
Cesium-137	U	2.56	+/-3.38	6.53	10.0	pCi/L					
Chromium-51	U	-7.14	+/-40.8	70.3		pCi/L					
Cobalt-56	U	5.43	+/-3.97	8.00		pCi/L					
Cobalt-57	U	0.546	+/-2.38	4.30		pCi/L					
Cobalt-58	U	-1.12	+/-4.23	6.37		pCi/L					
Cobalt-60	U	-3.71	+/-4.40	6.96		pCi/L					
Europium-152	U	6.25	+/-9.94	18.0		pCi/L					
Europium-154	U	8.75	+/-6.78	16.4		pCi/L					
Europium-155	U	-4.02	+/-9.27	16.3		pCi/L					
Iridium-192	U	-1.49	+/-3.88	6.05		pCi/L					
Iron-59	U	-3.87	+/-7.39	13.2		pCi/L					
Lead-210	U	96.1	+/-346	322		pCi/L					
Lead-212	U	-0.78	+/-6.75	11.0		pCi/L					
Lead-214	U	-0.467	+/-8.82	13.5		pCi/L					
Manganese-54	U	-0.934	+/-3.16	5.55		pCi/L					
Mercury-203	U	1.26	+/-3.96	7.04		pCi/L					
Neodymium-147	U	11.0	+/-67.3	125		pCi/L					
Neptunium-239	U	7.40	+/-24.6	44.6		pCi/L					
Niobium-94	U	-0.292	+/-3.11	5.56		pCi/L					
Niobium-95	U	4.70	+/-3.82	7.64		pCi/L					
Potassium-40	U	15.5	+/-40.5	66.6		pCi/L					
Promethium-144	U	0.780	+/-3.41	6.24		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 38 Project: WNUC00124  
Sample ID: 335887022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.96	+/-3.84	7.28	pCi/L
Radium-228	U	17.1	+/-15.9	26.6	pCi/L
Ruthenium-106	U	17.7	+/-29.7	56.6	pCi/L
Silver-110m	U	0.561	+/-3.20	5.89	pCi/L
Sodium-22	U	3.09	+/-2.40	5.66	pCi/L
Thallium-208	U	0.553	+/-4.53	6.97	pCi/L
Thorium-230	UI	0.00	+/-625	1140	pCi/L
Thorium-234	U	-83.5	+/-121	180	pCi/L
Tin-113	U	-2.83	+/-4.50	7.43	pCi/L
Uranium-235	U	-2.74	+/-24.0	34.7	pCi/L
Uranium-238	U	-83.5	+/-121	180	pCi/L
Yttrium-88	U	-1.84	+/-3.97	6.93	pCi/L
Zinc-65	U	-0.563	+/-6.92	12.9	pCi/L
Zirconium-95	U	2.89	+/-6.58	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.978	+/-2.66	4.88	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		2.93	+/-1.78	2.67	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	2.68	+/-122	215	300	pCi/L	MYM1	11/06/13	0332	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 39  
Sample ID: 335887023  
Matrix: Ground Water  
Collect Date: 16-OCT-13 11:24  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	16.4	+/-14.8	25.8		pCi/L		RXF2	11/02/13	1618 1341421	1
Americium-241	U	-8.14	+/-20.3	34.4		pCi/L					
Antimony-124	U	1.76	+/-8.22	16.7		pCi/L					
Antimony-125	U	3.15	+/-9.30	16.6		pCi/L					
Barium-133	U	0.720	+/-4.88	7.55		pCi/L					
Barium-140	U	-13.7	+/-13.1	18.1		pCi/L					
Beryllium-7	U	-5.88	+/-31.8	57.4		pCi/L					
Bismuth-212	U	16.8	+/-45.2	84.6		pCi/L					
Bismuth-214	U	4.47	+/-9.38	13.6		pCi/L					
Cerium-139	U	0.0473	+/-2.91	5.22		pCi/L					
Cerium-141	U	9.98	+/-8.50	12.0		pCi/L					
Cerium-144	U	-4.26	+/-21.3	35.4		pCi/L					
Cesium-134	U	2.06	+/-3.64	6.93		pCi/L					
Cesium-136	U	10.6	+/-10.1	21.0		pCi/L					
Cesium-137	U	1.29	+/-5.37	6.58	10.0	pCi/L					
Chromium-51	U	24.7	+/-41.9	75.9		pCi/L					
Cobalt-56	U	-3.15	+/-4.73	7.01		pCi/L					
Cobalt-57	U	1.94	+/-2.63	4.64		pCi/L					
Cobalt-58	U	-0.954	+/-3.82	6.68		pCi/L					
Cobalt-60	U	-2.55	+/-3.99	6.78		pCi/L					
Europium-152	U	5.91	+/-9.95	18.1		pCi/L					
Europium-154	U	3.54	+/-10.0	19.5		pCi/L					
Europium-155	U	7.94	+/-10.7	19.0		pCi/L					
Iridium-192	U	-1.36	+/-3.79	6.48		pCi/L					
Iron-59	U	-3.78	+/-6.27	11.0		pCi/L					
Lead-210	U	-614	+/-816	1150		pCi/L					
Lead-212	U	3.06	+/-7.13	11.9		pCi/L					
Lead-214	U	1.73	+/-8.24	14.2		pCi/L					
Manganese-54	U	-3.11	+/-3.99	5.41		pCi/L					
Mercury-203	U	-2.78	+/-4.74	6.82		pCi/L					
Neodymium-147	U	-18.9	+/-56.5	101		pCi/L					
Neptunium-239	U	-4.95	+/-29.5	49.4		pCi/L					
Niobium-94	U	3.30	+/-5.15	5.77		pCi/L					
Niobium-95	U	-2.71	+/-4.64	7.18		pCi/L					
Potassium-40		97.3	+/-59.0	59.7		pCi/L					
Promethium-144	U	1.64	+/-3.97	6.46		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	335887023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.48	+/-3.99	6.98	pCi/L
Radium-228	U	16.4	+/-14.8	25.8	pCi/L
Ruthenium-106	U	18.7	+/-30.3	57.8	pCi/L
Silver-110m	U	1.76	+/-2.91	5.10	pCi/L
Sodium-22	U	1.55	+/-3.51	6.92	pCi/L
Thallium-208	U	0.142	+/-5.46	6.26	pCi/L
Thorium-230	U	539	+/-1290	2280	pCi/L
Thorium-234	U	-149	+/-194	312	pCi/L
Tin-113	U	-1.52	+/-5.04	8.54	pCi/L
Uranium-235	U	6.43	+/-30.2	36.4	pCi/L
Uranium-238	U	-149	+/-194	312	pCi/L
Yttrium-88	U	7.15	+/-4.56	9.99	pCi/L
Zinc-65	U	7.56	+/-7.54	8.69	pCi/L
Zirconium-95	U	1.26	+/-6.69	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.31	+/-3.43	4.88	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	19.3	+/-2.66	2.44	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	27.2	+/-129	225	300	pCi/L	MYM1	11/06/13	0348	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 335887024  
Matrix: Ground Water  
Collect Date: 14-OCT-13 10:03  
Receive Date: 18-OCT-13  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.21	+/-16.6	24.6		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	-3.99	+/-19.1	29.2		pCi/L					
Antimony-124	U	1.73	+/-8.51	17.1		pCi/L					
Antimony-125	U	1.48	+/-8.65	15.6		pCi/L					
Barium-133	U	4.10	+/-4.67	7.85		pCi/L					
Barium-140	U	4.59	+/-10.9	21.3		pCi/L					
Beryllium-7	U	-0.725	+/-32.8	58.1		pCi/L					
Bismuth-212	U	-17.2	+/-51.4	76.8		pCi/L					
Bismuth-214	U	4.07	+/-9.43	12.2		pCi/L					
Cerium-139	U	-0.65	+/-3.19	5.31		pCi/L					
Cerium-141	U	0.839	+/-7.36	12.5		pCi/L					
Cerium-144	U	-13.3	+/-21.0	34.5		pCi/L					
Cesium-134	U	2.52	+/-3.63	6.43		pCi/L					
Cesium-136	U	-15.5	+/-11.9	18.7		pCi/L					
Cesium-137	U	0.995	+/-3.65	6.56	10.0	pCi/L					
Chromium-51	U	-13.5	+/-40.1	70.3		pCi/L					
Cobalt-56	U	3.28	+/-3.68	6.54		pCi/L					
Cobalt-57	U	-3.83	+/-2.68	4.21		pCi/L					
Cobalt-58	U	-0.945	+/-3.21	5.85		pCi/L					
Cobalt-60	U	2.05	+/-3.30	6.63		pCi/L					
Europium-152	U	-4.26	+/-9.32	16.2		pCi/L					
Europium-154	U	-2.75	+/-9.21	16.5		pCi/L					
Europium-155	U	-5.72	+/-10.5	17.5		pCi/L					
Iridium-192	U	-1.24	+/-3.38	5.93		pCi/L					
Iron-59	U	0.482	+/-6.35	12.1		pCi/L					
Lead-210	U	-47	+/-546	863		pCi/L					
Lead-212	U	5.32	+/-11.6	12.5		pCi/L					
Lead-214	U	6.09	+/-10.7	14.6		pCi/L					
Manganese-54	U	-1.09	+/-3.09	5.55		pCi/L					
Mercury-203	U	-0.298	+/-3.73	6.67		pCi/L					
Neodymium-147	U	0.0743	+/-70.3	125		pCi/L					
Neptunium-239	U	-24.6	+/-28.5	46.4		pCi/L					
Niobium-94	U	2.02	+/-3.18	5.88		pCi/L					
Niobium-95	UI	0.00	+/-11.3	6.79		pCi/L					
Potassium-40	U	-26.4	+/-54.0	90.0		pCi/L					
Promethium-144	U	-1.06	+/-3.43	5.84		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 335887024

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.45	+/-4.22	7.66	pCi/L
Radium-228	U	-4.21	+/-16.6	24.6	pCi/L
Ruthenium-106	U	-12.8	+/-31.5	53.5	pCi/L
Silver-110m	U	-0.896	+/-3.36	5.76	pCi/L
Sodium-22	U	-0.878	+/-3.27	5.87	pCi/L
Thallium-208	U	-4.2	+/-4.27	6.32	pCi/L
Thorium-230	U	271	+/-1260	2070	pCi/L
Thorium-234	U	81.7	+/-209	236	pCi/L
Tin-113	U	-1.94	+/-4.61	7.97	pCi/L
Uranium-235	U	-10.6	+/-24.7	37.1	pCi/L
Uranium-238	U	81.7	+/-209	236	pCi/L
Yttrium-88	U	-2.41	+/-3.53	6.16	pCi/L
Zinc-65	U	-3.48	+/-6.87	12.0	pCi/L
Zirconium-95	U	0.858	+/-7.47	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.40	+/-2.92	4.91	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		19.3	+/-3.07	3.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	47.2	+/-128	222	300	pCi/L	MYM1	11/06/13	0404	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	335887025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 11:42		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.60	+/-20.7	27.1		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	10.8	+/-19.9	21.8		pCi/L					
Antimony-124	U	3.65	+/-6.94	15.1		pCi/L					
Antimony-125	U	-0.844	+/-8.75	15.2		pCi/L					
Barium-133	U	0.400	+/-4.39	6.82		pCi/L					
Barium-140	U	2.11	+/-9.95	19.4		pCi/L					
Beryllium-7	U	1.09	+/-33.1	57.8		pCi/L					
Bismuth-212	U	-10.9	+/-42.6	76.3		pCi/L					
Bismuth-214	U	5.64	+/-12.7	11.2		pCi/L					
Cerium-139	U	0.0292	+/-2.79	4.99		pCi/L					
Cerium-141	U	3.31	+/-5.91	10.9		pCi/L					
Cerium-144	U	-1.3	+/-18.3	32.8		pCi/L					
Cesium-134	U	-2.48	+/-4.73	6.58		pCi/L					
Cesium-136	U	-2.94	+/-8.48	14.9		pCi/L					
Cesium-137	U	-4.79	+/-4.70	6.63	10.0	pCi/L					
Chromium-51	U	-6.98	+/-35.8	62.4		pCi/L					
Cobalt-56	U	2.28	+/-3.63	7.04		pCi/L					
Cobalt-57	U	-0.653	+/-2.21	3.94		pCi/L					
Cobalt-58	U	2.70	+/-3.26	6.42		pCi/L					
Cobalt-60	U	-0.053	+/-3.74	6.37		pCi/L					
Europium-152	U	-4.37	+/-9.20	15.6		pCi/L					
Europium-154	U	-7.88	+/-9.04	15.2		pCi/L					
Europium-155	U	-0.886	+/-10.1	16.9		pCi/L					
Iridium-192	U	-0.657	+/-3.23	5.62		pCi/L					
Iron-59	U	-0.235	+/-7.44	13.5		pCi/L					
Lead-210	U	20.7	+/-318	509		pCi/L					
Lead-212	U	1.40	+/-7.56	10.6		pCi/L					
Lead-214	U	11.3	+/-9.44	14.4		pCi/L					
Manganese-54	U	-0.572	+/-3.36	6.00		pCi/L					
Mercury-203	U	2.93	+/-3.77	6.97		pCi/L					
Neodymium-147	U	-39.6	+/-58.2	101		pCi/L					
Neptunium-239	U	3.67	+/-24.1	43.9		pCi/L					
Niobium-94	U	0.385	+/-3.17	5.83		pCi/L					
Niobium-95	U	-0.599	+/-4.12	6.40		pCi/L					
Potassium-40	U	-34.8	+/-49.6	86.8		pCi/L					
Promethium-144	U	-0.314	+/-3.37	6.06		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 43	Project:	WNUC00124
Sample ID:	335887025	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.42	+/-3.92	6.33	pCi/L
Radium-228	U	7.60	+/-20.7	27.1	pCi/L
Ruthenium-106	U	6.77	+/-26.7	50.5	pCi/L
Silver-110m	U	-0.868	+/-3.16	5.65	pCi/L
Sodium-22	U	-2.73	+/-3.20	5.41	pCi/L
Thallium-208	U	-3.58	+/-4.07	6.50	pCi/L
Thorium-230	UI	0.00	+/-1150	1520	pCi/L
Thorium-234	U	117	+/-155	175	pCi/L
Tin-113	U	-0.405	+/-4.02	7.02	pCi/L
Uranium-235	U	-0.726	+/-20.8	32.9	pCi/L
Uranium-238	U	117	+/-155	175	pCi/L
Yttrium-88	U	-0.981	+/-3.91	6.07	pCi/L
Zinc-65	U	5.55	+/-6.99	12.8	pCi/L
Zirconium-95	U	-1.87	+/-5.40	9.65	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	7.35	+/-3.58	4.86	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	11.2	+/-2.76	3.49	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-134	232	300	pCi/L	MYM1	11/06/13	0420	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	335887026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 12:01		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-21.4	27.3		pCi/L		RXF2	11/02/13	1619 1341421	1
Americium-241	U	14.2	+/-29.0	52.3		pCi/L					
Antimony-124	U	-5.44	+/-11.1	16.4		pCi/L					
Antimony-125	U	0.249	+/-8.79	15.8		pCi/L					
Barium-133	U	-1.72	+/-4.76	7.19		pCi/L					
Barium-140	U	1.37	+/-12.4	21.5		pCi/L					
Beryllium-7	U	-2.07	+/-33.0	58.6		pCi/L					
Bismuth-212	U	17.1	+/-46.7	90.2		pCi/L					
Bismuth-214	U	0.684	+/-12.4	17.1		pCi/L					
Cerium-139	U	-3.01	+/-3.28	5.22		pCi/L					
Cerium-141	U	-8.84	+/-8.99	13.1		pCi/L					
Cerium-144	U	-5.7	+/-23.5	39.4		pCi/L					
Cesium-134	U	-2.49	+/-3.51	6.05		pCi/L					
Cesium-136	U	-6.01	+/-11.1	19.2		pCi/L					
Cesium-137	U	2.96	+/-3.85	6.31	10.0	pCi/L					
Chromium-51	U	-10.3	+/-43.2	76.1		pCi/L					
Cobalt-56	U	-1.07	+/-3.87	6.99		pCi/L					
Cobalt-57	U	1.12	+/-3.04	5.30		pCi/L					
Cobalt-58	U	2.10	+/-3.61	7.19		pCi/L					
Cobalt-60	U	1.12	+/-3.69	7.20		pCi/L					
Europium-152	U	1.27	+/-10.3	18.6		pCi/L					
Europium-154	U	-0.253	+/-9.15	15.8		pCi/L					
Europium-155	U	13.2	+/-11.6	21.4		pCi/L					
Iridium-192	U	1.90	+/-3.73	6.92		pCi/L					
Iron-59	U	3.17	+/-8.43	16.4		pCi/L					
Lead-210	U	1430	+/-1230	2310		pCi/L					
Lead-212	U	7.18	+/-9.69	12.7		pCi/L					
Lead-214	U	1.38	+/-14.4	16.0		pCi/L					
Manganese-54	U	-1.61	+/-3.41	6.02		pCi/L					
Mercury-203	U	-2.11	+/-4.29	7.46		pCi/L					
Neodymium-147	U	1.96	+/-73.8	132		pCi/L					
Neptunium-239	U	-19.7	+/-31.3	51.5		pCi/L					
Niobium-94	U	0.531	+/-3.21	6.06		pCi/L					
Niobium-95	UI	0.00	+/-6.00	6.74		pCi/L					
Potassium-40	U	-39.8	+/-49.6	81.5		pCi/L					
Promethium-144	U	3.48	+/-3.35	6.77		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 44  
Sample ID: 335887026

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.42	+/-4.17	7.67	pCi/L
Radium-228	U	12.9	+/-21.4	27.3	pCi/L
Ruthenium-106	U	28.4	+/-31.3	60.5	pCi/L
Silver-110m	U	1.37	+/-3.64	6.25	pCi/L
Sodium-22	U	-0.0895	+/-3.24	5.59	pCi/L
Thallium-208	U	-2.41	+/-4.44	7.10	pCi/L
Thorium-230	U	1830	+/-2110	2320	pCi/L
Thorium-234	U	-98.8	+/-309	432	pCi/L
Tin-113	U	2.43	+/-4.98	9.18	pCi/L
Uranium-235	U	-3.6	+/-26.4	40.6	pCi/L
Uranium-238	U	-98.8	+/-309	432	pCi/L
Yttrium-88	U	-0.428	+/-3.36	6.66	pCi/L
Zinc-65	U	-10.9	+/-7.49	11.0	pCi/L
Zirconium-95	U	4.19	+/-6.17	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.88	+/-2.92	4.77	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta		4.21	+/-2.08	2.96	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	145	+/-133	221	300	pCi/L	MYM1	11/06/13	0437	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	335887027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-OCT-13 09:18		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.8	+/-16.4	28.5		pCi/L		RXF2	11/02/13	1620 1341421	1
Americium-241	U	-4.6	+/-21.2	38.1		pCi/L					
Antimony-124	U	8.31	+/-8.24	19.0		pCi/L					
Antimony-125	U	-0.183	+/-8.81	15.9		pCi/L					
Barium-133	U	-2.33	+/-4.25	6.39		pCi/L					
Barium-140	U	-1.43	+/-10.1	19.1		pCi/L					
Beryllium-7	U	-3.53	+/-32.3	57.6		pCi/L					
Bismuth-212	U	6.38	+/-41.7	79.9		pCi/L					
Bismuth-214	U	11.6	+/-10.6	16.8		pCi/L					
Cerium-139	U	-0.11	+/-2.84	4.94		pCi/L					
Cerium-141	U	-2.14	+/-6.75	11.5		pCi/L					
Cerium-144	U	15.5	+/-18.7	34.5		pCi/L					
Cesium-134	U	-1.71	+/-2.69	3.88		pCi/L					
Cesium-136	U	-2.57	+/-10.8	19.4		pCi/L					
Cesium-137	U	0.417	+/-3.40	6.14	10.0	pCi/L					
Chromium-51	U	32.0	+/-34.7	67.7		pCi/L					
Cobalt-56	U	0.680	+/-3.64	6.92		pCi/L					
Cobalt-57	U	1.43	+/-2.50	4.56		pCi/L					
Cobalt-58	U	-2.27	+/-3.39	5.88		pCi/L					
Cobalt-60	U	-0.772	+/-3.42	6.44		pCi/L					
Europium-152	U	-5.89	+/-9.63	16.1		pCi/L					
Europium-154	U	-0.907	+/-8.85	16.4		pCi/L					
Europium-155	U	-8.81	+/-9.86	16.6		pCi/L					
Iridium-192	U	-1.58	+/-3.28	5.79		pCi/L					
Iron-59	U	1.67	+/-7.26	14.0		pCi/L					
Lead-210	U	174	+/-797	1390		pCi/L					
Lead-212	U	7.33	+/-11.7	12.8		pCi/L					
Lead-214	U	5.79	+/-10.7	15.4		pCi/L					
Manganese-54	U	-0.664	+/-3.45	6.27		pCi/L					
Mercury-203	U	2.08	+/-4.58	7.09		pCi/L					
Neodymium-147	U	-60.9	+/-61.3	98.9		pCi/L					
Neptunium-239	U	-10.8	+/-26.4	45.5		pCi/L					
Niobium-94	U	1.09	+/-3.41	6.48		pCi/L					
Niobium-95	U	0.378	+/-4.55	7.43		pCi/L					
Potassium-40	U	-15	+/-49.7	93.2		pCi/L					
Promethium-144	U	-9.68	+/-6.66	6.19		pCi/L					

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	335887027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.74	+/-4.71	6.48	pCi/L
Radium-228	U	17.8	+/-16.4	28.5	pCi/L
Ruthenium-106	U	-4.77	+/-31.8	55.6	pCi/L
Silver-110m	U	-0.16	+/-3.04	5.41	pCi/L
Sodium-22	U	-0.435	+/-3.11	5.72	pCi/L
Thallium-208	U	2.22	+/-4.73	7.58	pCi/L
Thorium-230	U	-790	+/-1500	2400	pCi/L
Thorium-234	U	-83.7	+/-224	389	pCi/L
Tin-113	U	-2.06	+/-4.26	7.42	pCi/L
Uranium-235	U	9.20	+/-23.2	37.9	pCi/L
Uranium-238	U	-83.7	+/-224	389	pCi/L
Yttrium-88	U	4.42	+/-4.34	9.68	pCi/L
Zinc-65	U	0.382	+/-7.50	12.3	pCi/L
Zirconium-95	U	-0.129	+/-6.44	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	9.98	+/-4.45	4.96	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	102	+/-6.30	4.90	5.00	pCi/L					
Alpha	U 0.517	+/-2.76	5.00	5.00	pCi/L	JAOC	11/12/13	1831	1341309	3
Beta	99.1	+/-4.96	2.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	214	+/-131	212	300	pCi/L	MYM1	11/06/13	0453	1341886	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	335887027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	335887028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-OCT-13 10:50		
Receive Date:	18-OCT-13		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.7	+/-27.4	48.9		pCi/L		RXF2	11/02/13	1620 1341421	1
Americium-241	U	5.58	+/-16.9	29.3		pCi/L					
Antimony-124	U	-6.81	+/-13.4	24.5		pCi/L					
Antimony-125	U	12.3	+/-12.9	25.1		pCi/L					
Barium-133	U	-0.67	+/-6.05	9.37		pCi/L					
Barium-140	U	-11.5	+/-17.4	30.7		pCi/L					
Beryllium-7	U	-22.5	+/-40.1	71.5		pCi/L					
Bismuth-212	U	18.0	+/-77.1	134		pCi/L					
Bismuth-214	U	22.1	+/-21.2	22.9		pCi/L					
Cerium-139	U	-2.15	+/-3.64	6.43		pCi/L					
Cerium-141	U	3.34	+/-8.41	14.8		pCi/L					
Cerium-144	U	4.61	+/-26.8	46.4		pCi/L					
Cesium-134	U	-1.94	+/-4.14	7.30		pCi/L					
Cesium-136	U	11.2	+/-19.3	39.6		pCi/L					
Cesium-137	U	-1.48	+/-5.72	9.64	10.0	pCi/L					
Chromium-51	U	-22.8	+/-54.0	93.4		pCi/L					
Cobalt-56	U	-2.36	+/-5.20	9.06		pCi/L					
Cobalt-57	U	0.820	+/-3.27	5.71		pCi/L					
Cobalt-58	U	-4.64	+/-4.81	7.61		pCi/L					
Cobalt-60	U	-4.02	+/-4.54	7.24		pCi/L					
Europium-152	U	3.16	+/-14.5	23.4		pCi/L					
Europium-154	U	-0.142	+/-14.6	28.4		pCi/L					
Europium-155	U	0.263	+/-12.0	20.9		pCi/L					
Iridium-192	U	0.186	+/-5.60	9.34		pCi/L					
Iron-59	U	0.514	+/-10.3	20.6		pCi/L					
Lead-210	U	286	+/-392	648		pCi/L					
Lead-212	U	8.61	+/-13.4	17.6		pCi/L					
Lead-214	U	6.69	+/-13.1	21.3		pCi/L					
Manganese-54	U	-6.59	+/-5.76	8.97		pCi/L					
Mercury-203	U	-0.322	+/-5.61	10.0		pCi/L					
Neodymium-147	U	30.0	+/-93.5	182		pCi/L					
Neptunium-239	U	11.4	+/-32.5	57.4		pCi/L					
Niobium-94	U	-4.0	+/-5.35	8.36		pCi/L					
Niobium-95	U	1.04	+/-6.22	11.7		pCi/L					
Potassium-40	U	-59.5	+/-74.0	111		pCi/L					
Promethium-144	U	0.939	+/-5.20	9.75		pCi/L					



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## Certificate of Analysis

Report Date: November 27, 2013

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 48  
Sample ID: 335887028

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.43	+/-5.89	10.2	pCi/L
Radium-228	U	12.7	+/-27.4	48.9	pCi/L
Ruthenium-106	U	-27.7	+/-40.8	70.2	pCi/L
Silver-110m	U	-2.51	+/-4.65	8.13	pCi/L
Sodium-22	U	-0.0506	+/-5.15	10.1	pCi/L
Thallium-208	U	4.39	+/-7.18	7.99	pCi/L
Thorium-230	U	-468	+/-1310	2010	pCi/L
Thorium-234	U	10.4	+/-197	273	pCi/L
Tin-113	U	3.38	+/-6.97	12.9	pCi/L
Uranium-235	U	-17.3	+/-28.2	42.4	pCi/L
Uranium-238	U	10.4	+/-197	273	pCi/L
Yttrium-88	U	-3.73	+/-7.35	13.2	pCi/L
Zinc-65	U	-6.14	+/-11.0	19.5	pCi/L
Zirconium-95	U	-6.84	+/-10.3	17.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.70	+/-3.47	4.80	5.00	pCi/L	JAOC	11/10/13	1045	1341309	2
Beta	16.6	+/-3.06	2.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-126	218	300	pCi/L	MYM1	11/06/13	0509	1341886	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: November 27, 2013

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 335887

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1346857										
QC1202986880	335887010	DUP									
Uranium-233/234		3.81		4.34	pCi/L	13.1		(0%-20%)	HAKB	11/18/13	10:46
	Uncertainty	+/-1.03		+/-1.10							
Uranium-235/236	U	0.407	U	0.329	pCi/L	N/A		N/A			
	Uncertainty	+/-0.414		+/-0.388							
Uranium-238		1.99		1.75	pCi/L	12.6		(0%-20%)			
	Uncertainty	+/-0.744		+/-0.709							
QC1202986881	LCS										
Uranium-233/234				25.3	pCi/L					11/18/13	10:46
	Uncertainty			+/-2.40							
Uranium-235/236				1.98	pCi/L						
	Uncertainty			+/-0.761							
Uranium-238	27.0			25.9	pCi/L		95.8	(75%-125%)			
	Uncertainty			+/-2.43							
QC1202986879	MB										
Uranium-233/234			U	-0.0174	pCi/L					11/18/13	10:46
	Uncertainty			+/-0.150							
Uranium-235/236			U	0.00	pCi/L						
	Uncertainty			+/-0.181							
Uranium-238			U	-0.0174	pCi/L						
	Uncertainty			+/-0.150							
<b>Rad Gamma Spec</b>											
Batch	1341420										
QC1202973518	335887001	DUP									
Actinium-228	U	6.48	U	-17.4	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-27.9		+/-19.6							
Americium-241	U	7.21	U	-1.85	pCi/L	N/A		N/A			
	Uncertainty	+/-22.7		+/-11.2							
Antimony-124	U	12.6	U	-4.29	pCi/L	N/A		N/A			
	Uncertainty	+/-9.93		+/-9.37							
Antimony-125	U	-0.513	U	0.480	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-8.44							
Barium-133	U	-2.19	U	-7.02	pCi/L	N/A		N/A			
	Uncertainty	+/-5.62		+/-4.36							
Barium-140	U	-2.09	U	4.66	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-14.0							
Beryllium-7	U	44.3	U	-19.1	pCi/L	N/A		N/A			
	Uncertainty	+/-95.2		+/-30.1							
Bismuth-212	U	-39	U	-9.0	pCi/L	N/A		N/A			
	Uncertainty	+/-64.9		+/-60.0							
Bismuth-214	U	5.73	U	0.770	pCi/L	N/A		N/A			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
	Uncertainty										
		+/-16.0		+/-14.5							
Cerium-139	U	-1.29	U	3.39	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-3.85		+/-2.92							
Cerium-141	U	-1.45	U	4.47	pCi/L	N/A		N/A			
	Uncertainty	+/-8.72		+/-6.64							
Cerium-144	U	2.03	U	-5.06	pCi/L	N/A		N/A			
	Uncertainty	+/-24.7		+/-17.4							
Cesium-134	U	-3.04	U	-1.83	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-3.79							
Cesium-136	U	9.23	U	3.30	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-10.9							
Cesium-137	U	2.77	U	-0.804	pCi/L	N/A		N/A			
	Uncertainty	+/-6.06		+/-4.32							
Chromium-51	U	-51.8	U	20.6	pCi/L	N/A		N/A			
	Uncertainty	+/-49.9		+/-38.3							
Cobalt-56	U	1.92	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-4.57		+/-4.05							
Cobalt-57	U	-0.677	U	-0.334	pCi/L	N/A		N/A			
	Uncertainty	+/-3.12		+/-2.18							
Cobalt-58	U	-3.18	U	2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.75		+/-3.63							
Cobalt-60	U	-4.42	U	1.93	pCi/L	N/A		N/A			
	Uncertainty	+/-4.30		+/-3.70							
Europium-152	U	3.29	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-11.6		+/-8.52							
Europium-154	U	-7.01	U	4.01	pCi/L	N/A		N/A			
	Uncertainty	+/-10.5		+/-9.20							
Europium-155	U	-0.878	U	-7.2	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-8.25							
Iridium-192	U	5.31	U	-4.25	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-4.16							
Iron-59	U	-0.462	U	6.43	pCi/L	N/A		N/A			
	Uncertainty	+/-7.94		+/-7.32							
Lead-210	U	-651	U	132	pCi/L	N/A		N/A			
	Uncertainty	+/-637		+/-357							
Lead-212	U	9.27	U	2.69	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-8.57							
Lead-214	U	-1.19	U	-1.96	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-10.2							
Manganese-54	U	1.01	U	-3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.68		+/-3.47							
Mercury-203	U	4.50	U	1.01	pCi/L	N/A		N/A			
	Uncertainty	+/-6.63		+/-3.49							

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Neodymium-147	U	18.8	U	14.3	pCi/L	N/A		N/A			
	Uncertainty	+/-76.4		+/-63.1							
Neptunium-239	U	-12.6	U	-16.4	pCi/L	N/A		N/A	RXF2	11/01/13	17:07
	Uncertainty	+/-32.5		+/-22.0							
Niobium-94	U	0.540	U	-0.463	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-3.26							
Niobium-95	U	-2.12	U	0.464	pCi/L	N/A		N/A			
	Uncertainty	+/-5.05		+/-4.44							
Potassium-40	U	-48.5	U	33.5	pCi/L	N/A		N/A			
	Uncertainty	+/-54.2		+/-81.6							
Promethium-144	U	-1.04	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-3.27							
Promethium-146	U	-0.372	U	3.21	pCi/L	N/A		N/A			
	Uncertainty	+/-5.01		+/-3.88							
Radium-228	U	6.48	U	-17.4	pCi/L	N/A		N/A			
	Uncertainty	+/-27.9		+/-19.6							
Ruthenium-106	U	-2.35	U	6.56	pCi/L	N/A		N/A			
	Uncertainty	+/-44.5		+/-28.8							
Silver-110m	U	2.02	U	-3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.42		+/-3.22							
Sodium-22	U	-2.75	U	1.37	pCi/L	N/A		N/A			
	Uncertainty	+/-3.75		+/-3.25							
Thallium-208	U	-0.11	U	-2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-4.84		+/-5.37							
Thorium-230	U	-116	U	336	pCi/L	N/A		N/A			
	Uncertainty	+/-1560		+/-847							
Thorium-234	U	289	U	41.7	pCi/L	N/A		N/A			
	Uncertainty	+/-353		+/-177							
Tin-113	U	-1.79	U	0.685	pCi/L	N/A		N/A			
	Uncertainty	+/-5.44		+/-4.96							
Uranium-235	U	11.5	U	13.6	pCi/L	N/A		N/A			
	Uncertainty	+/-31.4		+/-30.1							
Uranium-238	U	289	U	41.7	pCi/L	N/A		N/A			
	Uncertainty	+/-353		+/-177							
Yttrium-88	U	-0.296	U	-0.568	pCi/L	N/A		N/A			
	Uncertainty	+/-3.79		+/-4.33							
Zinc-65	U	2.79	U	-10.6	pCi/L	N/A		N/A			
	Uncertainty	+/-7.73		+/-8.60							
Zirconium-95	U	-3.29	U	0.549	pCi/L	N/A		N/A			
	Uncertainty	+/-9.53		+/-6.92							
QC1202973519	LCS										
Actinium-228			U	315	pCi/L					11/01/13	14:23
	Uncertainty			+/-499							
Americium-241	1.11E+05			1.21E+05	pCi/L		109	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
				+/-1100							
Antimony-124			U	-11.1	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-127							
Antimony-125			U	-150	pCi/L						
	Uncertainty			+/-261							
Barium-133			U	-70.2	pCi/L						
	Uncertainty			+/-107							
Barium-140			U	-30.1	pCi/L						
	Uncertainty			+/-91.4							
Beryllium-7			U	155	pCi/L						
	Uncertainty			+/-826							
Bismuth-212			U	-373	pCi/L						
	Uncertainty			+/-1320							
Bismuth-214			U	-90.7	pCi/L						
	Uncertainty			+/-168							
Cerium-139				3310	pCi/L						
	Uncertainty			+/-119							
Cerium-141			U	56.0	pCi/L						
	Uncertainty			+/-114							
Cerium-144			U	-164	pCi/L						
	Uncertainty			+/-483							
Cesium-134			U	71.0	pCi/L						
	Uncertainty			+/-116							
Cesium-136			U	154	pCi/L						
	Uncertainty			+/-241							
Cesium-137	45700			47300	pCi/L		103	(75%-125%)			
	Uncertainty			+/-401							
Chromium-51			U	321	pCi/L						
	Uncertainty			+/-793							
Cobalt-56			U	107	pCi/L						
	Uncertainty			+/-120							
Cobalt-57				9010	pCi/L						
	Uncertainty			+/-155							
Cobalt-58			U	-9.43	pCi/L						
	Uncertainty			+/-129							
Cobalt-60	61500			61300	pCi/L		99.8	(75%-125%)			
	Uncertainty			+/-500							
Europium-152			U	10.8	pCi/L						
	Uncertainty			+/-246							
Europium-154			U	-57.7	pCi/L						
	Uncertainty			+/-178							
Europium-155			U	-0.768	pCi/L						
	Uncertainty			+/-246							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Iridium-192			U	-38.8	pCi/L						
	Uncertainty			+/-82.5							
Iron-59			U	-104	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-251							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-15500							
Lead-212			U	94.3	pCi/L						
	Uncertainty			+/-138							
Lead-214			U	37.1	pCi/L						
	Uncertainty			+/-184							
Manganese-54			U	-53.7	pCi/L						
	Uncertainty			+/-110							
Mercury-203			U	20.2	pCi/L						
	Uncertainty			+/-83.8							
Neodymium-147			U	-628	pCi/L						
	Uncertainty			+/-951							
Neptunium-239			U	66.0	pCi/L						
	Uncertainty			+/-738							
Niobium-94			U	-2.14	pCi/L						
	Uncertainty			+/-83.3							
Niobium-95			U	-134	pCi/L						
	Uncertainty			+/-103							
Potassium-40			U	-389	pCi/L						
	Uncertainty			+/-473							
Promethium-144			U	6.88	pCi/L						
	Uncertainty			+/-84.7							
Promethium-146			U	26.2	pCi/L						
	Uncertainty			+/-121							
Radium-228			U	315	pCi/L						
	Uncertainty			+/-499							
Ruthenium-106			U	225	pCi/L						
	Uncertainty			+/-793							
Silver-110m				669	pCi/L						
	Uncertainty			+/-112							
Sodium-22			U	-21.2	pCi/L						
	Uncertainty			+/-64.4							
Thallium-208			U	-25	pCi/L						
	Uncertainty			+/-87.7							
Thorium-230			U	32500	pCi/L						
	Uncertainty			+/-30200							
Thorium-234			U	-8220	pCi/L						
	Uncertainty			+/-4360							
Tin-113				3190	pCi/L						
	Uncertainty			+/-192							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341420										
Uranium-235			U	126	pCi/L						
	Uncertainty			+/-418							
Uranium-238			U	-8220	pCi/L				RXF2	11/01/13	14:23
	Uncertainty			+/-4360							
Yttrium-88				4100	pCi/L						
	Uncertainty			+/-163							
Zinc-65				31300	pCi/L						
	Uncertainty			+/-653							
Zirconium-95			U	-83.3	pCi/L						
	Uncertainty			+/-184							
QC1202973517	MB										
Actinium-228			U	-4.74	pCi/L					11/01/13	12:39
	Uncertainty			+/-21.4							
Americium-241			U	4.91	pCi/L						
	Uncertainty			+/-11.8							
Antimony-124			U	4.86	pCi/L						
	Uncertainty			+/-7.81							
Antimony-125			U	-1.43	pCi/L						
	Uncertainty			+/-9.65							
Barium-133			U	-3.58	pCi/L						
	Uncertainty			+/-5.58							
Barium-140			U	-2.25	pCi/L						
	Uncertainty			+/-6.24							
Beryllium-7			U	-10.5	pCi/L						
	Uncertainty			+/-30.1							
Bismuth-212			U	56.3	pCi/L						
	Uncertainty			+/-54.5							
Bismuth-214			U	-3.09	pCi/L						
	Uncertainty			+/-9.87							
Cerium-139			U	-0.114	pCi/L						
	Uncertainty			+/-2.66							
Cerium-141			U	2.40	pCi/L						
	Uncertainty			+/-5.52							
Cerium-144			U	-3.9	pCi/L						
	Uncertainty			+/-19.2							
Cesium-134			U	3.12	pCi/L						
	Uncertainty			+/-5.03							
Cesium-136			U	2.73	pCi/L						
	Uncertainty			+/-7.40							
Cesium-137			U	-1.04	pCi/L						
	Uncertainty			+/-4.63							
Chromium-51			U	-16.1	pCi/L						
	Uncertainty			+/-33.8							
Cobalt-56			U	4.76	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1341420										
Cobalt-57				+/-5.02							
			U	-0.0837	pCi/L				RXF2	11/01/13	12:39
Cobalt-58	Uncertainty			+/-2.52							
			U	3.75	pCi/L						
Cobalt-60	Uncertainty			+/-3.23							
			U	-0.928	pCi/L						
Europium-152	Uncertainty			+/-4.70							
			U	15.0	pCi/L						
Europium-154	Uncertainty			+/-13.1							
			U	-1.01	pCi/L						
Europium-155	Uncertainty			+/-11.1							
			U	-1.19	pCi/L						
Iridium-192	Uncertainty			+/-9.61							
			U	1.06	pCi/L						
Iron-59	Uncertainty			+/-3.36							
			U	-5.96	pCi/L						
Lead-210	Uncertainty			+/-6.37							
			U	-279	pCi/L						
Lead-212	Uncertainty			+/-252							
			U	3.60	pCi/L						
Lead-214	Uncertainty			+/-9.29							
			U	-5.08	pCi/L						
Manganese-54	Uncertainty			+/-10.5							
			U	-1.51	pCi/L						
Mercury-203	Uncertainty			+/-3.90							
			U	-0.927	pCi/L						
Neodymium-147	Uncertainty			+/-3.57							
			U	34.4	pCi/L						
Neptunium-239	Uncertainty			+/-33.7							
			U	-20	pCi/L						
Niobium-94	Uncertainty			+/-29.3							
			U	-2.7	pCi/L						
Niobium-95	Uncertainty			+/-3.67							
			U	-0.167	pCi/L						
Potassium-40	Uncertainty			+/-3.58							
			U	-52.4	pCi/L						
Promethium-144	Uncertainty			+/-49.7							
			U	-1.47	pCi/L						
Promethium-146	Uncertainty			+/-3.89							
			U	-0.783	pCi/L						
Radium-228	Uncertainty			+/-4.49							
			U	-4.74	pCi/L						
	Uncertainty			+/-21.4							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1341420										
Ruthenium-106			U	-16.8	pCi/L						
	Uncertainty			+/-30.4							
Silver-110m			U	-2.68	pCi/L				RXF2	11/01/13	12:39
	Uncertainty			+/-3.72							
Sodium-22			U	-0.354	pCi/L						
	Uncertainty			+/-3.91							
Thallium-208			U	1.06	pCi/L						
	Uncertainty			+/-5.89							
Thorium-230			U	768	pCi/L						
	Uncertainty			+/-946							
Thorium-234			U	0.400	pCi/L						
	Uncertainty			+/-167							
Tin-113			U	-0.0375	pCi/L						
	Uncertainty			+/-4.23							
Uranium-235			U	10.9	pCi/L						
	Uncertainty			+/-24.0							
Uranium-238			U	0.400	pCi/L						
	Uncertainty			+/-167							
Yttrium-88			U	2.73	pCi/L						
	Uncertainty			+/-4.28							
Zinc-65			U	3.98	pCi/L						
	Uncertainty			+/-12.1							
Zirconium-95			U	1.38	pCi/L						
	Uncertainty			+/-7.11							
Batch	1341421										
QC1202973521 335887021 DUP											
Actinium-228	U	-7.32	U	4.74	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-25.0		+/-22.9							
Americium-241	U	4.69	U	12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-6.05		+/-25.3							
Antimony-124	U	1.69	U	0.0387	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-10.7							
Antimony-125	U	-3.91	U	12.5	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-11.7							
Barium-133	U	0.412	U	-7.16	pCi/L	N/A		N/A			
	Uncertainty	+/-6.72		+/-5.22							
Barium-140	U	4.88	U	-4.33	pCi/L	N/A		N/A			
	Uncertainty	+/-15.9		+/-14.6							
Beryllium-7	U	39.2	U	1.29	pCi/L	N/A		N/A			
	Uncertainty	+/-41.3		+/-39.7							
Bismuth-212	U	-63.2	U	2.77	pCi/L	N/A		N/A			
	Uncertainty	+/-67.0		+/-59.1							
Bismuth-214	U	7.81	U	1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-13.0		+/-14.2							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Cerium-139	U	-2.11	U	-1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-2.98		+/-4.35							
Cerium-141	U	-3.43	U	-1.06	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-7.29		+/-10.4							
Cerium-144	U	24.9	U	-16.8	pCi/L	N/A		N/A			
	Uncertainty	+/-25.5		+/-25.4							
Cesium-134	U	0.624	U	1.12	pCi/L	N/A		N/A			
	Uncertainty	+/-5.41		+/-4.92							
Cesium-136	U	-5.79	U	-8.18	pCi/L	N/A		N/A			
	Uncertainty	+/-14.8		+/-14.9							
Cesium-137	U	2.84	U	-1.09	pCi/L	N/A		N/A			
	Uncertainty	+/-4.62		+/-4.76							
Chromium-51	U	-7.48	U	-34	pCi/L	N/A		N/A			
	Uncertainty	+/-42.5		+/-56.7							
Cobalt-56	U	0.809	U	2.27	pCi/L	N/A		N/A			
	Uncertainty	+/-5.07		+/-4.82							
Cobalt-57	U	3.37	U	3.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.63		+/-3.22							
Cobalt-58	U	3.11	U	-2.11	pCi/L	N/A		N/A			
	Uncertainty	+/-4.71		+/-4.38							
Cobalt-60	U	0.927	U	-2.53	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.53							
Europium-152	U	3.13	U	-3.33	pCi/L	N/A		N/A			
	Uncertainty	+/-10.2		+/-13.8							
Europium-154	U	11.5	U	4.88	pCi/L	N/A		N/A			
	Uncertainty	+/-11.8		+/-12.8							
Europium-155	U	5.77	U	-3.04	pCi/L	N/A		N/A			
	Uncertainty	+/-8.78		+/-12.9							
Iridium-192	U	-1.54	U	3.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-4.80							
Iron-59	U	3.42	U	-5.17	pCi/L	N/A		N/A			
	Uncertainty	+/-9.85		+/-9.23							
Lead-210	U	93.0	U	-196	pCi/L	N/A		N/A			
	Uncertainty	+/-124		+/-771							
Lead-212	U	2.65	U	0.792	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-10.2							
Lead-214	U	3.12	U	-1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-12.1							
Manganese-54	U	0.0126	U	2.23	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-4.99							
Mercury-203	U	2.48	U	0.283	pCi/L	N/A		N/A			
	Uncertainty	+/-4.94		+/-5.18							
Neodymium-147	U	31.7	U	-43.6	pCi/L	N/A		N/A			
	Uncertainty	+/-75.2		+/-94.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Neptunium-239	U	-14.1	U	13.0	pCi/L	N/A		N/A			
	Uncertainty	+/-22.5		+/-33.4							
Niobium-94	U	-1.45	U	-2.4	pCi/L	N/A		N/A	RXF2	11/04/13	10:31
	Uncertainty	+/-4.42		+/-3.99							
Niobium-95	U	-4.44	U	0.601	pCi/L	N/A		N/A			
	Uncertainty	+/-5.12		+/-4.37							
Potassium-40	U	10.1	U	18.2	pCi/L	N/A		N/A			
	Uncertainty	+/-56.6		+/-64.4							
Promethium-144	U	1.11	U	-0.193	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-4.74							
Promethium-146	U	2.88	U	-1.1	pCi/L	N/A		N/A			
	Uncertainty	+/-4.86		+/-5.04							
Radium-228	U	-7.32	U	4.74	pCi/L	N/A		N/A			
	Uncertainty	+/-25.0		+/-22.9							
Ruthenium-106	U	-19.3	U	-25.6	pCi/L	N/A		N/A			
	Uncertainty	+/-39.4		+/-34.3							
Silver-110m	U	-4.29	U	2.57	pCi/L	N/A		N/A			
	Uncertainty	+/-4.57		+/-4.59							
Sodium-22	U	2.61	U	1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-4.55							
Thallium-208	U	-4.27	U	2.53	pCi/L	N/A		N/A			
	Uncertainty	+/-5.78		+/-6.17							
Thorium-230	U	246	U	1090	pCi/L	N/A		N/A			
	Uncertainty	+/-651		+/-1540							
Thorium-234	U	-25.9	U	37.9	pCi/L	N/A		N/A			
	Uncertainty	+/-88.8		+/-276							
Tin-113	U	-3.6	U	0.0241	pCi/L	N/A		N/A			
	Uncertainty	+/-4.86		+/-5.60							
Uranium-235	U	1.94	U	-14.7	pCi/L	N/A		N/A			
	Uncertainty	+/-23.1		+/-29.1							
Uranium-238	U	-25.9	U	37.9	pCi/L	N/A		N/A			
	Uncertainty	+/-88.8		+/-276							
Yttrium-88	U	-7.5	U	-0.227	pCi/L	N/A		N/A			
	Uncertainty	+/-5.77		+/-5.15							
Zinc-65	U	9.93	U	1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-9.69							
Zirconium-95	U	-8.78	U	5.87	pCi/L	N/A		N/A			
	Uncertainty	+/-9.06		+/-7.84							
QC1202973522	LCS										
Actinium-228			U	166	pCi/L					11/04/13	10:32
	Uncertainty			+/-581							
Americium-241	1.11E+05			1.21E+05	pCi/L		110	(75%-125%)			
	Uncertainty			+/-1220							
Antimony-124			U	-23.7	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1341421										
Antimony-125				+/-137							
			U	-88.7	pCi/L				RXF2	11/04/13	10:32
Barium-133	Uncertainty			+/-280							
			U	-25.6	pCi/L						
Barium-140	Uncertainty			+/-121							
			U	92.7	pCi/L						
Beryllium-7	Uncertainty			+/-127							
			U	1100	pCi/L						
Bismuth-212	Uncertainty			+/-1010							
			U	-589	pCi/L						
Bismuth-214	Uncertainty			+/-1590							
			U	93.5	pCi/L						
Cerium-139	Uncertainty			+/-199							
				3320	pCi/L						
Cerium-141	Uncertainty			+/-130							
			U	6.45	pCi/L						
Cerium-144	Uncertainty			+/-126							
			U	23.5	pCi/L						
Cesium-134	Uncertainty			+/-540							
			U	-15.4	pCi/L						
Cesium-136	Uncertainty			+/-137							
			U	-15.9	pCi/L						
Cesium-137	Uncertainty			+/-325							
	45700			47700	pCi/L		104	(75%-125%)			
Chromium-51	Uncertainty			+/-455							
			U	-15.5	pCi/L						
Cobalt-56	Uncertainty			+/-947							
			U	-31.4	pCi/L						
Cobalt-57	Uncertainty			+/-144							
				9020	pCi/L						
Cobalt-58	Uncertainty			+/-161							
			U	40.1	pCi/L						
Cobalt-60	Uncertainty			+/-135							
	61500			61100	pCi/L		99.4	(75%-125%)			
Europium-152	Uncertainty			+/-555							
			U	-160	pCi/L						
Europium-154	Uncertainty			+/-276							
			U	-84.1	pCi/L						
Europium-155	Uncertainty			+/-201							
			U	3.41	pCi/L						
Iridium-192	Uncertainty			+/-303							
			U	-85.2	pCi/L						
	Uncertainty			+/-97.6							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1341421										
Iron-59			U	-96.9	pCi/L						
	Uncertainty			+/-320							
Lead-210				1.51E+06	pCi/L				RXF2	11/04/13	10:32
	Uncertainty			+/-22500							
Lead-212			U	113	pCi/L						
	Uncertainty			+/-148							
Lead-214			U	-73	pCi/L						
	Uncertainty			+/-210							
Manganese-54			U	-83.9	pCi/L						
	Uncertainty			+/-149							
Mercury-203			U	42.3	pCi/L						
	Uncertainty			+/-97.0							
Neodymium-147			U	-18.3	pCi/L						
	Uncertainty			+/-1340							
Neptunium-239			U	447	pCi/L						
	Uncertainty			+/-810							
Niobium-94			U	-104	pCi/L						
	Uncertainty			+/-100							
Niobium-95			U	30.3	pCi/L						
	Uncertainty			+/-122							
Potassium-40			U	466	pCi/L						
	Uncertainty			+/-537							
Promethium-144			U	18.9	pCi/L						
	Uncertainty			+/-103							
Promethium-146			U	5.29	pCi/L						
	Uncertainty			+/-139							
Radium-228			U	166	pCi/L						
	Uncertainty			+/-581							
Ruthenium-106			U	20.1	pCi/L						
	Uncertainty			+/-954							
Silver-110m				1790	pCi/L						
	Uncertainty			+/-147							
Sodium-22			U	-28.3	pCi/L						
	Uncertainty			+/-70.8							
Thallium-208			U	65.9	pCi/L						
	Uncertainty			+/-111							
Thorium-230			U	28400	pCi/L						
	Uncertainty			+/-33700							
Thorium-234			U	-6710	pCi/L						
	Uncertainty			+/-4450							
Tin-113				3040	pCi/L						
	Uncertainty			+/-207							
Uranium-235			U	57.3	pCi/L						
	Uncertainty			+/-434							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Uranium-238			U	-6710	pCi/L						
	Uncertainty			+/-4450							
Yttrium-88				3820	pCi/L				RXF2	11/04/13	10:32
	Uncertainty			+/-202							
Zinc-65				30900	pCi/L						
	Uncertainty			+/-808							
Zirconium-95			U	-71.7	pCi/L						
	Uncertainty			+/-228							
QC1202973520	MB										
Actinium-228			U	9.81	pCi/L					11/04/13	10:31
	Uncertainty			+/-25.0							
Americium-241			U	-5.38	pCi/L						
	Uncertainty			+/-26.5							
Antimony-124			U	-2.26	pCi/L						
	Uncertainty			+/-9.73							
Antimony-125			U	-4.59	pCi/L						
	Uncertainty			+/-8.85							
Barium-133			U	-3.33	pCi/L						
	Uncertainty			+/-4.44							
Barium-140			U	1.97	pCi/L						
	Uncertainty			+/-8.83							
Beryllium-7			U	-2.85	pCi/L						
	Uncertainty			+/-33.2							
Bismuth-212			U	5.33	pCi/L						
	Uncertainty			+/-45.4							
Bismuth-214			U	-9.35	pCi/L						
	Uncertainty			+/-9.82							
Cerium-139			U	-0.973	pCi/L						
	Uncertainty			+/-2.88							
Cerium-141			U	-4.2	pCi/L						
	Uncertainty			+/-6.36							
Cerium-144			U	-11.2	pCi/L						
	Uncertainty			+/-18.4							
Cesium-134			U	2.59	pCi/L						
	Uncertainty			+/-3.70							
Cesium-136			U	8.19	pCi/L						
	Uncertainty			+/-8.85							
Cesium-137			U	0.114	pCi/L						
	Uncertainty			+/-3.73							
Chromium-51			U	-10.7	pCi/L						
	Uncertainty			+/-35.0							
Cobalt-56			U	0.142	pCi/L						
	Uncertainty			+/-4.05							
Cobalt-57			U	-0.336	pCi/L						
	Uncertainty										

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Cobalt-58				+/-2.49							
			U	2.98	pCi/L				RXF2	11/04/13	10:31
Cobalt-60	Uncertainty			+/-3.85							
			U	-2.36	pCi/L						
Europium-152	Uncertainty			+/-3.50							
			U	1.59	pCi/L						
Europium-154	Uncertainty			+/-9.99							
			U	10.7	pCi/L						
Europium-155	Uncertainty			+/-10.4							
			U	3.73	pCi/L						
Iridium-192	Uncertainty			+/-11.6							
			U	0.527	pCi/L						
Iron-59	Uncertainty			+/-3.73							
			U	3.21	pCi/L						
Lead-210	Uncertainty			+/-10.9							
			U	101	pCi/L						
Lead-212	Uncertainty			+/-1160							
			U	2.40	pCi/L						
Lead-214	Uncertainty			+/-10.2							
			U	-8.86	pCi/L						
Manganese-54	Uncertainty			+/-9.72							
			U	-2.18	pCi/L						
Mercury-203	Uncertainty			+/-3.81							
			U	1.02	pCi/L						
Neodymium-147	Uncertainty			+/-3.42							
			U	0.175	pCi/L						
Neptunium-239	Uncertainty			+/-45.3							
			U	-12.6	pCi/L						
Niobium-94	Uncertainty			+/-25.3							
			U	2.25	pCi/L						
Niobium-95	Uncertainty			+/-3.37							
			U	0.402	pCi/L						
Potassium-40	Uncertainty			+/-3.46							
			U	-13.6	pCi/L						
Promethium-144	Uncertainty			+/-57.4							
			U	2.47	pCi/L						
Promethium-146	Uncertainty			+/-3.45							
			U	0.705	pCi/L						
Radium-228	Uncertainty			+/-4.27							
			U	9.81	pCi/L						
Ruthenium-106	Uncertainty			+/-25.0							
			U	-1.27	pCi/L						
	Uncertainty			+/-32.7							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1341421										
Silver-110m			U	-1.43	pCi/L						
	Uncertainty			+/-3.93							
Sodium-22			U	3.43	pCi/L				RXF2	11/04/13	10:31
	Uncertainty			+/-3.71							
Thallium-208			U	0.856	pCi/L						
	Uncertainty			+/-6.05							
Thorium-230			U	1410	pCi/L						
	Uncertainty			+/-1510							
Thorium-234			U	0.725	pCi/L						
	Uncertainty			+/-237							
Tin-113			U	1.78	pCi/L						
	Uncertainty			+/-4.70							
Uranium-235			U	1.06	pCi/L						
	Uncertainty			+/-22.0							
Uranium-238			U	0.725	pCi/L						
	Uncertainty			+/-237							
Yttrium-88			U	0.549	pCi/L						
	Uncertainty			+/-4.19							
Zinc-65			U	4.77	pCi/L						
	Uncertainty			+/-6.96							
Zirconium-95			U	1.56	pCi/L						
	Uncertainty			+/-6.38							
<b>Rad Gas Flow</b>											
Batch	1341307										
QC1202973257	335887001	DUP									
Alpha			U	3.05	pCi/L	52.3		(0% - 100%)	JAOC	11/10/13	11:19
	Uncertainty			+/-2.92							
Beta				12.5	pCi/L	2.60		(0% - 100%)			
	Uncertainty			+/-2.85							
QC1202973258	LCS										
Alpha				123	pCi/L		98.8	(75%-125%)		11/10/13	11:04
	Uncertainty			+/-13.2							
Beta				481	pCi/L		111	(75%-125%)			
	Uncertainty			+/-20.3							
QC1202973256	MB										
Alpha			U	0.581	pCi/L					11/10/13	11:19
	Uncertainty			+/-2.35							
Beta			U	1.22	pCi/L						
	Uncertainty			+/-2.14							
Batch	1341309										
QC1202973261	335887016	DUP									
Alpha			U	0.351	pCi/L	N/A		N/A	JAOC	11/10/13	10:45
	Uncertainty			+/-2.49							
Beta				12.5	pCi/L	48.4		(0% - 100%)			
	Uncertainty			+/-2.77							



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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1341309										
QC1202973262	LCS										
Alpha	123			133	pCi/L		108	(75%-125%)	JAOC	11/10/13	10:45
	Uncertainty			+/-12.8							
Beta	481			537	pCi/L		112	(75%-125%)			
	Uncertainty			+/-18.4							
QC1202973260	MB										
Alpha			U	0.542	pCi/L					11/10/13	10:45
	Uncertainty			+/-2.46							
Beta			U	0.413	pCi/L						
	Uncertainty			+/-1.77							
<b>Rad Liquid Scintillation</b>											
Batch	1341885										
QC1202974713	335887001	DUP									
Technetium-99			U	-41.5	U	-22.4	pCi/L	N/A		N/AMYM1	11/05/13 05:14
			Uncertainty	+/-133		+/-130					
QC1202974714	LCS										
Technetium-99				4340		4570	pCi/L		105	(75%-125%)	11/05/13 05:30
				Uncertainty		+/-268					
QC1202974712	MB										
Technetium-99			U	11.6	pCi/L					11/05/13	04:58
				Uncertainty		+/-133					
Batch	1341886										
QC1202974716	335887015	DUP									
Technetium-99			U	24.1	U	14.0	pCi/L	N/A		N/AMYM1	11/06/13 05:41
			Uncertainty	+/-124		+/-126					
QC1202974717	LCS										
Technetium-99				4340		4540	pCi/L		105	(75%-125%)	11/06/13 05:58
				Uncertainty		+/-272					
QC1202974715	MB										
Technetium-99			U	48.3	pCi/L					11/06/13	05:25
				Uncertainty		+/-128					

### 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 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.

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## QC Summary

Workorder: 335887

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 27 November 2013**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122013-2
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	January 13, 2014			Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: W - N
Facility Name	Westinghouse			Protective Abutment: Y - N	Integrity Satisfactory: O - N
Well ID #	RW-2			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	31.25				
Depth To Groundwater (DGW) =	18.24				
Length Of Water Column (LWC) =	13.01				
1 Casing Volume (OCV) = LWC x 0.163	= 2.1			gal.	
3 Casing Volumes = 6.4				gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	(TB) SSB WW GP Other				
Method of Sample Collection	(TB) SSB WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 <sup>st</sup>	2.1	4.2	6.4	Well Sample Time: 0941
TIME (24 HOUR SYSTEM)	0921	0933	0936	0940	Remarks:
pH (SU)	4.85	4.56	4.48	4.44	
WATER TEMPERATURE (°C)	15.2	16.5	16.5	16.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	219	388.7	388.2	377	
TURBIDITY (SUBJECTIVE)*	1	1	1	1	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 13, 2014		Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel		BTF		Guard Pipe: PVC - Metal	No
Facility Name		Westinghouse		Protective Abutment: Y	N
Well ID #		N-26		Well Yield: Low - Mod. - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) = 32.00					
Depth To Groundwater (DGW) = 25.85					
Length Of Water Column (LWC) = 6.15					
1 Casing Volume (OCV) = LWC x 0.163 = 1		gal.			
3 Casing Volumes = 3		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =		gal.			
Method of Well Evacuation		TB SSB WW GP Other			
Method of Sample Collection		TB SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Granfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1.5	1015	5.73	15.9	172	1	1
1.6	1017	5.76	17.1	177.4	1	1
2.0	1019	5.74	17.5	180.3	1	1
3	1620	5.73	17.6	182	1	1
Well Sample Time: 1021						
Remarks:						

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY) <b>January 13, 2014</b>		Casing Diameter: <b>2</b> inches		Casing Material: <b>PVC - Metal</b>	
Field Personnel <b>BTF</b>		Guard Pipe: <b>PVC - Metal</b> - No		Locking Cap: <b>Y</b> - N	
Facility Name <b>Westinghouse</b>		Protective Abutment: <b>Y</b> - <b>N</b>		Integrity Satisfactory: <b>Y</b> - N	
Well ID # <b>MW-41</b>		Well Yield: Low - Mod. - High			
Weather Conditions		Remarks:			
Total Well Depth (TWD) = <b>27.00</b>					
Depth To Groundwater (DGW) = <b>15.64</b>					
Length Of Water Column (LWC) = <b>11.36</b>					
1 Casing Volume (OCV) = LWC x <b>0.163</b> = <b>1.9</b> gal.					
3 Casing Volumes = <b>5.6</b> gal. = Standard Evacuation Volume					
Total Volume of Water Removed =					
Method of Well Evacuation <b>TB</b> SSB WW GP Other					
Method of Sample Collection <b>TB</b> SSB WW GP Other					

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1.9	3.8	5.6				
0.952	0.955	0.958	10.00			
5.63	5.53	5.63	5.63			
15.4	15.8	16.3	15.8			
261.9	408.4	414	408			
1	1	1	1			
1	1	1	1			

Well Sample Time: **1:02**

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 13, 2014		Casing Diameter:	4 inches	Casing Material:	PVC - Metal
Field Personnel		BTF		Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Facility Name		Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #		W-48		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		44.60					
Depth To Groundwater (DGW) =		26.69					
Length Of Water Column (LWC) =		17.91					
1 Casing Volume (OCV) = LWC x		0.652		=		11 gal.	
3 Casing Volumes =		33		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		TB	SSB	WW	GP	Other	
Method of Sample Collection		TB	SSB	WW	GP	Other	

**Evacuation and Collection Methods**

TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

	1	2	3	Well Sample Time:
VOLUME PURGED (GALLONS)	11			1100
TIME (24 HOUR SYSTEM)	1077	1047	1054	Remarks:
pH (SU)	5.46	5.70	5.72	
WATER TEMPERATURE (°C.)	16.2	18	12.4	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	110	109.5	106.1	
TURBIDITY (SUBJECTIVE)*	1	1	1	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PA13010  
Date Completed: 01/16/2014



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PA13010 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PA13010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: PA13010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	01/13/2014 0941	01/13/2014
002	W-26	Aqueous	01/13/2014 1021	01/13/2014
003	MW-41	Aqueous	01/13/2014 1002	01/13/2014
004	W-48	Aqueous	01/13/2014 1100	01/13/2014
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PA13010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	140		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	9.9		ug/L	7
002	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.0		ug/L	11
003	MW-41	Aqueous	cis-1,2-Dichloroethene	8260B	1.2		ug/L	16
003	MW-41	Aqueous	Tetrachloroethene	8260B	200		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	34		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.3		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	2.9		ug/L	22

(9 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 01/13/2014 0941	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 0941	BTF		
1		(Specific Con) 120.1	1	01/13/2014 0941	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 0941	BTF		
1		(Water level )	1	01/13/2014 0941	BTF		
1		(Well Depth)	1	01/13/2014 0941	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.49			su	1
Specific Conductance @ 25° C - Field		120.1	377		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.9			° C	1
Water level depth from top of casing		No Method	18.24			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/13/2014 0941							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0010	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/13/2014 0941							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0010	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	9.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/13/2014 0941

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1228	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/13/2014 0941

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1228	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		105	41-144
2-Fluorobiphenyl		91	37-129
2-Fluorophenol		87	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		81	28-128
Terphenyl-d14		57	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 9 of 24

Level 1 Report v2.1

## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 1021	BTF		
1		(Specific Con) 120.1	1	01/13/2014 1021	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 1021	BTF		
1		(Water level )	1	01/13/2014 1021	BTF		
1		(Well Depth)	1	01/13/2014 1021	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.73			su	1
Specific Conductance @ 25° C - Field		120.1	182		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.6			° C	1
Water level depth from top of casing		No Method	25.85			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/13/2014 1021							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0033	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.0		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/13/2014 1021							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0033	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1254	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-002

Description: W-26

Matrix: Aqueous

Date Sampled: 01/13/2014 1021

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1254	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		104	41-144
2-Fluorobiphenyl		89	37-129
2-Fluorophenol		87	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		82	28-128
Terphenyl-d14		80	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 01/13/2014 1002	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 1002	BTF		
1		(Specific Con) 120.1	1	01/13/2014 1002	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 1002	BTF		
1		(Water level )	1	01/13/2014 1002	BTF		
1		(Well Depth)	1	01/13/2014 1002	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.63			su	1
Specific Conductance @ 25° C - Field		120.1	408		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	15.8			° C	1
Water level depth from top of casing		No Method	15.66			feet	1
Well Depth		No Method	27.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/13/2014 1002							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0056	TAF		38456
2	5030B	8260B	5	01/15/2014 2233	ALL		38525

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.2		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/13/2014 1002							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0056	TAF		38456
2	5030B	8260B	5	01/15/2014 2233	ALL		38525

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	200		5.0	ug/L	2
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	34		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130		94	70-130
Bromofluorobenzene		108	70-130		107	70-130
Toluene-d8		101	70-130		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/13/2014 1002

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1413	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/13/2014 1002

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1413	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		96	41-144
2-Fluorobiphenyl		87	37-129
2-Fluorophenol		81	24-127
Nitrobenzene-d5		71	38-127
Phenol-d5		75	28-128
Terphenyl-d14		74	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PA13010-004
Description: W-48	Matrix: Aqueous
Date Sampled: 01/13/2014 1100	
Date Received: 01/13/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/13/2014 1100	BTF		
1		(Specific Con) 120.1	1	01/13/2014 1100	BTF		
1		(Temperature ) SM 2550B-2010	1	01/13/2014 1100	BTF		
1		(Water level )	1	01/13/2014 1100	BTF		
1		(Well Depth)	1	01/13/2014 1100	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.72			su	1
Specific Conductance @ 25° C - Field		120.1	106		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.4			° C	1
Water level depth from top of casing		No Method	26.69			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/13/2014 1100							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0118	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.3		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PA13010-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/13/2014 1100							
Date Received: 01/13/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2014 0118	TAF		38456

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-004

Description: W-48

Matrix: Aqueous

Date Sampled: 01/13/2014 1100

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1439	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	1
Anthracene	120-12-7	8270D	ND		5.1	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.1	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	1
Chrysene	218-01-9	8270D	ND		5.1	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	1
Fluorene	86-73-7	8270D	ND		5.1	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PA13010-004

Description: W-48

Matrix: Aqueous

Date Sampled: 01/13/2014 1100

Date Received: 01/13/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/14/2014 1439	DRB1	01/13/2014 1444	38335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	1
Isophorone	78-59-1	8270D	ND		5.1	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	1
Phenol	108-95-2	8270D	ND		5.1	ug/L	1
Pyrene	129-00-0	8270D	ND		5.1	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		100	41-144
2-Fluorobiphenyl		93	37-129
2-Fluorophenol		88	24-127
Nitrobenzene-d5		74	38-127
Phenol-d5		83	28-128
Terphenyl-d14		93	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 24 of 24

Level 1 Report v2.1



Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealyab.com

Number 06788

Level 1 Report v2.1





February 12, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental - PO 4500467846  
Work Order: 341588

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 17, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500467846  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

341588

VENDOR: General Engineering Laboratories (GEL)

Month: Jan

Year: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/13/14 09:41	1000	X	X	X		X	REC
WELL	#3A	1/13/14 14:14	1000	X	X	X		X	REC
WELL	#7	1/14/14 14:37	1000	X	X	X		X	REC
WELL	#10	1/14/14 14:58	1000	X	X	X		X	REC
WELL	#13R	1/14/14 14:16	1000	X	X	X		X	REC
WELL	#14	1/15/14 14:30	1000	X	X	X		X	REC
WELL	#15	1/15/14 13:45	1000	X	X	X		X	REC
WELL	#16	1/15/14 14:49	1000	X	X	X		X	REC
WELL	#17	1/15/14 10:11	1000	X	X	X		X	REC
WELL	#18	1/14/14 12:34	1000	X	X	X		X	REC
WELL	#20	1/13/14 13:32	1000	X	X	X		X	REC
WELL	#22	1/14/14 12:15	1000	X	X	X		X	REC
WELL	#23R	1/15/14 14:05	1000	X	X	X		X	REC
WELL	#24	1/13/14 11:26	1000	X	X	X		X	REC
WELL	#26	1/13/14 10:21	1000	X	X	X		X	REC
WELL	#27	1/13/14 14:29	1000	X	X	X		X	REC
WELL	#28	1/14/14 13:50	1000	X	X	X		X	REC
WELL	#29	1/14/14 11:37	1000	X	X	X		X	REC
WELL	#30	1/14/14 11:58	1000	X	X	X		X	REC
WELL	#32	1/14/14 15:16	1000	X	X	X		X	REC
WELL	#33	1/15/14 11:19	1000	X	X	X		X	REC
WELL	#38	1/14/14 09:44	1000	X	X	X		X	REC
WELL	#39	1/15/14 10:34	1000	X	X	X		X	REC
WELL	#41R	1/13/14 10:02	1000	X	X	X		X	REC
WELL	#43	1/15/14 10:55	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/16/14

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Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.



## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WMC</u>		SDG/AR/COC/Work Order: <u>341588</u>	
Received By: <u>SHANTA WHITLOCK</u>		Date Received: <u>1-17-14 @ 9:20</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>14C</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other <u>12222 210 01 9095 0310</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 341588 GEL Work Order: 341588

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 341588001  
Matrix: Ground Water  
Collect Date: 13-JAN-14 09:41  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.99	+/-20.7	30.3		pCi/L		RXF2	01/31/14	1128 1361916	1
Americium-241	U	14.0	+/-28.2	52.6		pCi/L					
Antimony-124	U	-4.73	+/-10.5	18.9		pCi/L					
Antimony-125	U	4.62	+/-8.72	16.7		pCi/L					
Barium-133	U	-0.452	+/-5.18	8.16		pCi/L					
Barium-140	U	1.70	+/-10.2	20.9		pCi/L					
Beryllium-7	U	-4.76	+/-38.0	67.3		pCi/L					
Bismuth-212	U	20.9	+/-45.4	90.6		pCi/L					
Bismuth-214	U	11.1	+/-9.86	17.7		pCi/L					
Cerium-139	U	1.52	+/-3.13	5.58		pCi/L					
Cerium-141	U	-2.13	+/-7.77	12.2		pCi/L					
Cerium-144	U	8.10	+/-20.0	35.9		pCi/L					
Cesium-134	U	-0.838	+/-3.81	6.99		pCi/L					
Cesium-136	U	21.3	+/-8.77	23.4		pCi/L					
Cesium-137	U	1.56	+/-4.37	7.08	10.0	pCi/L					
Chromium-51	U	31.7	+/-43.1	75.0		pCi/L					
Cobalt-56	U	-2.13	+/-4.15	7.29		pCi/L					
Cobalt-57	U	-2.27	+/-2.66	4.39		pCi/L					
Cobalt-58	U	-2.85	+/-3.71	6.33		pCi/L					
Cobalt-60	U	0.607	+/-4.48	8.77		pCi/L					
Europium-152	U	-6.9	+/-9.57	16.4		pCi/L					
Europium-154	U	-5.22	+/-11.9	21.7		pCi/L					
Europium-155	U	-5.3	+/-10.9	18.6		pCi/L					
Iridium-192	U	5.33	+/-4.04	7.48		pCi/L					
Iron-59	U	-0.918	+/-10.1	18.5		pCi/L					
Lead-210	U	187	+/-1520	2450		pCi/L					
Lead-212	U	0.977	+/-8.73	13.2		pCi/L					
Lead-214	U	5.56	+/-10.4	16.1		pCi/L					
Manganese-54	U	1.21	+/-3.18	6.33		pCi/L					
Mercury-203	U	-1.01	+/-4.20	7.53		pCi/L					
Neodymium-147	U	-2.67	+/-72.4	130		pCi/L					
Neptunium-239	U	22.1	+/-27.6	51.0		pCi/L					
Niobium-94	U	-0.442	+/-3.40	6.28		pCi/L					
Niobium-95	U	1.43	+/-3.71	7.35		pCi/L					
Potassium-40	U	22.7	+/-45.2	65.3		pCi/L					
Promethium-144	U	2.22	+/-3.59	7.10		pCi/L					



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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL RW-2  
Sample ID: 341588001

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.27	+/-4.28	7.69	pCi/L
Radium-228	U	1.99	+/-20.7	30.3	pCi/L
Ruthenium-106	U	-5.97	+/-34.6	60.4	pCi/L
Silver-110m	U	-1.96	+/-3.27	5.79	pCi/L
Sodium-22	U	-1.79	+/-4.21	7.69	pCi/L
Thallium-208	U	-7.87	+/-4.46	6.17	pCi/L
Thorium-230	U	-3010	+/-1850	2680	pCi/L
Thorium-234	U	-119	+/-257	418	pCi/L
Tin-113	U	-1.14	+/-4.48	7.96	pCi/L
Uranium-235	U	2.82	+/-24.8	36.8	pCi/L
Uranium-238	U	-119	+/-257	418	pCi/L
Yttrium-88	U	-0.148	+/-3.93	6.92	pCi/L
Zinc-65	U	3.88	+/-7.58	15.3	pCi/L
Zirconium-95	U	-7.83	+/-7.97	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.45	+/-3.44	4.99	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		22.9	+/-4.43	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	44.7	+/-136	235	300	pCi/L	MYM1	01/28/14	0949	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 341588002  
Matrix: Ground Water  
Collect Date: 13-JAN-14 14:14  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.06	+/-14.7	24.5		pCi/L		RXF2	02/04/14	0747 1361916	1
Americium-241	U	-12.2	+/-11.8	19.0		pCi/L					
Antimony-124	U	2.26	+/-7.36	15.4		pCi/L					
Antimony-125	U	5.25	+/-8.21	15.2		pCi/L					
Barium-133	U	-1.1	+/-4.35	6.51		pCi/L					
Barium-140	U	3.08	+/-9.82	20.3		pCi/L					
Beryllium-7	U	15.3	+/-30.0	57.7		pCi/L					
Bismuth-212	U	-3.45	+/-40.1	73.4		pCi/L					
Bismuth-214	UI	0.00	+/-9.86	13.9		pCi/L					
Cerium-139	U	-0.905	+/-2.80	4.31		pCi/L					
Cerium-141	U	-1.84	+/-6.95	10.8		pCi/L					
Cerium-144	U	1.04	+/-16.8	29.5		pCi/L					
Cesium-134	U	-3.5	+/-3.52	5.74		pCi/L					
Cesium-136	U	-9.45	+/-13.3	17.8		pCi/L					
Cesium-137	U	2.02	+/-3.66	6.42	10.0	pCi/L					
Chromium-51	U	4.90	+/-39.8	70.8		pCi/L					
Cobalt-56	U	-3.0	+/-4.01	6.49		pCi/L					
Cobalt-57	U	0.974	+/-2.12	3.93		pCi/L					
Cobalt-58	U	3.70	+/-4.20	6.81		pCi/L					
Cobalt-60	U	0.952	+/-2.91	5.91		pCi/L					
Europium-152	U	-9.29	+/-8.71	14.0		pCi/L					
Europium-154	U	0.771	+/-8.95	17.4		pCi/L					
Europium-155	U	3.60	+/-8.69	16.1		pCi/L					
Iridium-192	U	0.802	+/-3.31	5.94		pCi/L					
Iron-59	U	1.27	+/-7.69	14.4		pCi/L					
Lead-210	U	-96.1	+/-286	429		pCi/L					
Lead-212	U	1.73	+/-6.41	10.6		pCi/L					
Lead-214	U	11.0	+/-8.31	13.7		pCi/L					
Manganese-54	U	-0.449	+/-3.08	5.56		pCi/L					
Mercury-203	U	0.301	+/-3.67	6.52		pCi/L					
Neodymium-147	U	39.3	+/-72.3	140		pCi/L					
Neptunium-239	U	6.16	+/-22.8	41.7		pCi/L					
Niobium-94	U	0.979	+/-3.03	5.26		pCi/L					
Niobium-95	U	3.71	+/-3.32	6.85		pCi/L					
Potassium-40	U	11.9	+/-41.0	52.9		pCi/L					
Promethium-144	U	-0.521	+/-3.07	4.80		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 3A  
Sample ID: 341588002

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.960	+/-4.00	7.14	pCi/L
Radium-228	U	3.06	+/-14.7	24.5	pCi/L
Ruthenium-106	U	3.69	+/-27.9	52.0	pCi/L
Silver-110m	U	0.774	+/-3.58	5.86	pCi/L
Sodium-22	U	0.426	+/-3.12	6.10	pCi/L
Thallium-208	U	-0.545	+/-4.05	6.23	pCi/L
Thorium-230	U	724	+/-906	1440	pCi/L
Thorium-234	U	-99.6	+/-139	217	pCi/L
Tin-113	U	0.0191	+/-3.89	6.86	pCi/L
Uranium-235	U	18.8	+/-19.5	28.8	pCi/L
Uranium-238	U	-99.6	+/-139	217	pCi/L
Yttrium-88	U	3.00	+/-3.47	7.84	pCi/L
Zinc-65	U	-3.56	+/-6.56	11.1	pCi/L
Zirconium-95	U	-1.9	+/-5.62	10.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.03	+/-2.02	4.82	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta	U	-1.06	+/-2.15	4.32	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	53.9	+/-147	255	300	pCi/L	MYM1	01/28/14	1005	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			83.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 14:37		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.1	+/-23.6	31.1		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	-3.37	+/-22.0	39.2		pCi/L					
Antimony-124	U	2.70	+/-9.95	20.8		pCi/L					
Antimony-125	U	2.46	+/-9.58	17.7		pCi/L					
Barium-133	U	-4.19	+/-5.54	8.04		pCi/L					
Barium-140	U	1.74	+/-12.3	25.0		pCi/L					
Beryllium-7	U	23.3	+/-39.5	74.4		pCi/L					
Bismuth-212	U	31.2	+/-57.1	96.4		pCi/L					
Bismuth-214	UI	0.00	+/-16.1	17.7		pCi/L					
Cerium-139	U	-2.29	+/-3.34	5.49		pCi/L					
Cerium-141	U	-5.47	+/-9.39	13.9		pCi/L					
Cerium-144	U	3.34	+/-22.6	39.5		pCi/L					
Cesium-134	U	0.606	+/-3.84	7.38		pCi/L					
Cesium-136	U	2.10	+/-13.2	25.4		pCi/L					
Cesium-137	U	-0.14	+/-3.23	6.14	10.0	pCi/L					
Chromium-51	U	-11.5	+/-47.2	84.0		pCi/L					
Cobalt-56	U	-4.77	+/-4.54	7.40		pCi/L					
Cobalt-57	U	-2.73	+/-2.80	4.58		pCi/L					
Cobalt-58	UI	0.00	+/-5.83	3.71		pCi/L					
Cobalt-60	U	2.55	+/-4.04	7.89		pCi/L					
Europium-152	U	-1.85	+/-9.90	17.7		pCi/L					
Europium-154	U	3.13	+/-10.7	21.8		pCi/L					
Europium-155	U	0.440	+/-12.5	21.8		pCi/L					
Iridium-192	U	1.25	+/-4.02	7.45		pCi/L					
Iron-59	U	2.56	+/-9.27	18.0		pCi/L					
Lead-210	U	-1280	+/-981	1480		pCi/L					
Lead-212	U	3.96	+/-8.12	11.0		pCi/L					
Lead-214	U	4.59	+/-13.9	16.8		pCi/L					
Manganese-54	U	1.67	+/-3.57	7.06		pCi/L					
Mercury-203	U	1.76	+/-4.66	8.65		pCi/L					
Neodymium-147	U	0.545	+/-76.6	139		pCi/L					
Neptunium-239	U	5.53	+/-29.7	52.4		pCi/L					
Niobium-94	U	-0.24	+/-3.87	6.51		pCi/L					
Niobium-95	U	-1.57	+/-3.80	6.83		pCi/L					
Potassium-40	U	-40.8	+/-50.5	95.4		pCi/L					
Promethium-144	U	-3.28	+/-4.41	6.50		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.852	+/-4.06	7.53	pCi/L
Radium-228	U	18.1	+/-23.6	31.1	pCi/L
Ruthenium-106	U	-49.3	+/-28.3	42.5	pCi/L
Silver-110m	U	-0.0745	+/-3.02	5.76	pCi/L
Sodium-22	U	1.14	+/-3.78	7.73	pCi/L
Thallium-208	U	2.89	+/-4.93	5.64	pCi/L
Thorium-230	U	145	+/-1480	2640	pCi/L
Thorium-234	U	-74.2	+/-235	393	pCi/L
Tin-113	U	1.63	+/-5.11	9.45	pCi/L
Uranium-235	U	-2.78	+/-27.4	42.2	pCi/L
Uranium-238	U	-74.2	+/-235	393	pCi/L
Yttrium-88	U	2.63	+/-5.26	10.6	pCi/L
Zinc-65	U	1.79	+/-9.04	17.1	pCi/L
Zirconium-95	U	4.48	+/-7.74	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.90	+/-3.13	4.95	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		144	+/-5.58	2.88	5.00	pCi/L					
Alpha	U	3.89	+/-3.75	4.99	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		125	+/-6.26	2.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	398	+/-147	224	300	pCi/L	MYM1	01/28/14	1021	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.6	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 7	Project:	WNUC00124
Sample ID:	341588003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 10	Project:	WNUC00124
Sample ID:	341588004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 14:58		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.0705	+/-21.3	31.6		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	1.25	+/-22.7	37.3		pCi/L					
Antimony-124	U	4.81	+/-12.2	24.4		pCi/L					
Antimony-125	U	-1.94	+/-11.3	19.5		pCi/L					
Barium-133	U	-3.57	+/-5.71	8.31		pCi/L					
Barium-140	U	-12.6	+/-14.4	23.8		pCi/L					
Beryllium-7	U	11.0	+/-41.7	74.1		pCi/L					
Bismuth-212	U	5.01	+/-57.3	104		pCi/L					
Bismuth-214	U	8.61	+/-16.7	14.4		pCi/L					
Cerium-139	U	-2.99	+/-3.56	5.81		pCi/L					
Cerium-141	U	10.7	+/-8.74	14.5		pCi/L					
Cerium-144	U	-14	+/-23.6	39.7		pCi/L					
Cesium-134	U	-3.63	+/-4.53	7.46		pCi/L					
Cesium-136	U	3.39	+/-14.1	27.0		pCi/L					
Cesium-137	U	-4.38	+/-4.88	7.52	10.0	pCi/L					
Chromium-51	U	-31.8	+/-48.3	82.4		pCi/L					
Cobalt-56	U	-3.36	+/-4.97	8.24		pCi/L					
Cobalt-57	U	0.552	+/-2.97	5.23		pCi/L					
Cobalt-58	U	4.11	+/-5.38	9.21		pCi/L					
Cobalt-60	U	0.887	+/-4.14	7.91		pCi/L					
Europium-152	U	-7.5	+/-12.5	20.4		pCi/L					
Europium-154	U	2.37	+/-11.5	21.9		pCi/L					
Europium-155	U	-0.829	+/-11.7	20.6		pCi/L					
Iridium-192	U	-0.61	+/-4.30	7.57		pCi/L					
Iron-59	U	-3.24	+/-9.51	17.0		pCi/L					
Lead-210	U	358	+/-746	1180		pCi/L					
Lead-212	U	3.44	+/-10.6	13.2		pCi/L					
Lead-214	U	6.25	+/-14.1	16.5		pCi/L					
Manganese-54	U	2.12	+/-4.06	7.65		pCi/L					
Mercury-203	U	2.12	+/-4.78	8.75		pCi/L					
Neodymium-147	U	-31.9	+/-90.5	161		pCi/L					
Neptunium-239	U	10.3	+/-31.7	56.1		pCi/L					
Niobium-94	U	-0.126	+/-3.65	6.56		pCi/L					
Niobium-95	U	1.87	+/-7.37	9.07		pCi/L					
Potassium-40	U	50.5	+/-77.1	83.5		pCi/L					
Promethium-144	U	1.15	+/-3.85	7.13		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 341588004

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.492	+/-5.32	9.31	pCi/L
Radium-228	U	0.0705	+/-21.3	31.6	pCi/L
Ruthenium-106	U	7.32	+/-37.1	68.3	pCi/L
Silver-110m	U	0.165	+/-4.16	7.53	pCi/L
Sodium-22	U	0.613	+/-4.12	7.80	pCi/L
Thallium-208	U	-3.12	+/-5.35	8.53	pCi/L
Thorium-230	U	514	+/-1940	2570	pCi/L
Thorium-234	U	175	+/-353	300	pCi/L
Tin-113	U	-0.015	+/-5.43	9.55	pCi/L
Uranium-235	U	4.68	+/-36.8	37.2	pCi/L
Uranium-238	U	175	+/-353	300	pCi/L
Yttrium-88	U	-5.66	+/-5.57	8.78	pCi/L
Zinc-65	U	3.86	+/-9.62	16.4	pCi/L
Zirconium-95	U	1.42	+/-8.42	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.78	+/-3.02	4.99	5.00	pCi/L	JAOC	01/31/14	0947	1362035	2
Beta		97.1	+/-5.25	3.02	5.00	pCi/L					
Alpha	U	0.433	+/-2.80	4.92	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		86.9	+/-4.91	2.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	173	+/-147	243	300	pCi/L	MYM1	01/28/14	1038	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.4	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 10  
Sample ID: 341588004

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005  
Matrix: Ground Water  
Collect Date: 14-JAN-14 14:16  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.23	+/-16.9	27.8		pCi/L		RXF2	02/04/14	0819 1361916	1
Americium-241	U	-9.79	+/-27.9	49.3		pCi/L					
Antimony-124	U	6.99	+/-9.79	22.1		pCi/L					
Antimony-125	U	6.27	+/-10.1	19.1		pCi/L					
Barium-133	U	-0.037	+/-4.78	7.63		pCi/L					
Barium-140	U	12.3	+/-11.0	26.6		pCi/L					
Beryllium-7	U	12.3	+/-35.8	66.7		pCi/L					
Bismuth-212	U	1.12	+/-45.3	86.1		pCi/L					
Bismuth-214	U	10.4	+/-13.6	12.6		pCi/L					
Cerium-139	U	-2.02	+/-3.10	5.12		pCi/L					
Cerium-141	U	6.86	+/-7.52	13.8		pCi/L					
Cerium-144	U	-6.71	+/-20.3	34.8		pCi/L					
Cesium-134	U	-1.42	+/-4.14	7.45		pCi/L					
Cesium-136	U	-1.98	+/-15.2	27.8		pCi/L					
Cesium-137	U	-0.995	+/-4.31	7.42	10.0	pCi/L					
Chromium-51	U	28.1	+/-45.2	85.8		pCi/L					
Cobalt-56	U	1.35	+/-4.13	8.04		pCi/L					
Cobalt-57	U	-0.802	+/-2.69	4.64		pCi/L					
Cobalt-58	U	6.02	+/-4.15	8.98		pCi/L					
Cobalt-60	U	-3.57	+/-4.59	7.29		pCi/L					
Europium-152	U	0.146	+/-9.82	17.9		pCi/L					
Europium-154	U	-0.648	+/-11.5	22.2		pCi/L					
Europium-155	U	8.72	+/-10.8	20.1		pCi/L					
Iridium-192	U	0.441	+/-4.07	7.43		pCi/L					
Iron-59	U	2.14	+/-8.91	17.3		pCi/L					
Lead-210	U	-638	+/-1500	2230		pCi/L					
Lead-212	U	2.70	+/-7.92	12.2		pCi/L					
Lead-214	UI	0.00	+/-13.0	15.5		pCi/L					
Manganese-54	U	-1.68	+/-3.40	6.02		pCi/L					
Mercury-203	U	-0.0479	+/-4.03	7.37		pCi/L					
Neodymium-147	U	-19.8	+/-70.4	124		pCi/L					
Neptunium-239	U	13.8	+/-28.1	50.9		pCi/L					
Niobium-94	U	-3.76	+/-3.81	5.96		pCi/L					
Niobium-95	U	0.685	+/-3.99	7.68		pCi/L					
Potassium-40	U	24.5	+/-51.2	72.5		pCi/L					
Promethium-144	U	1.18	+/-3.35	6.53		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.327	+/-4.42	7.93	pCi/L
Radium-228	U	-2.23	+/-16.9	27.8	pCi/L
Ruthenium-106	U	-12	+/-32.0	54.8	pCi/L
Silver-110m	U	0.671	+/-3.74	7.13	pCi/L
Sodium-22	U	-0.138	+/-4.08	7.90	pCi/L
Thallium-208	U	-0.874	+/-4.48	7.48	pCi/L
Thorium-230	U	56.9	+/-1770	2930	pCi/L
Thorium-234	U	-57.9	+/-255	406	pCi/L
Tin-113	U	-0.674	+/-5.57	8.71	pCi/L
Uranium-235	U	-13.3	+/-21.1	35.2	pCi/L
Uranium-238	U	-57.9	+/-255	406	pCi/L
Yttrium-88	U	-1.76	+/-4.16	7.57	pCi/L
Zinc-65	U	-0.57	+/-7.60	14.1	pCi/L
Zirconium-95	U	-0.437	+/-7.39	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.94	+/-3.19	4.77	5.00	pCi/L	JAOC	01/31/14	1158	1362035	2
Beta		155	+/-7.65	2.93	5.00	pCi/L					
Alpha		5.85	+/-4.44	4.88	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta		145	+/-7.42	2.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	180	+/-108	176	300	pCi/L	MYM1	02/04/14	0714	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 13R  
Sample ID: 341588005

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 14	Project:	WNUC00124
Sample ID:	341588006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 14:30		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-20.6	35.0		pCi/L		RXF2	02/04/14	0820	1361916	1
Americium-241	U	-5.02	+/-25.5	43.9		pCi/L						
Antimony-124	U	-6.0	+/-9.82	17.1		pCi/L						
Antimony-125	U	-7.74	+/-10.9	18.9		pCi/L						
Barium-133	U	1.82	+/-5.32	8.43		pCi/L						
Barium-140	U	-1.84	+/-16.3	26.1		pCi/L						
Beryllium-7	U	13.2	+/-41.9	77.8		pCi/L						
Bismuth-212	U	30.8	+/-52.7	101		pCi/L						
Bismuth-214	U	8.89	+/-11.3	17.6		pCi/L						
Cerium-139	U	-2.23	+/-4.08	6.15		pCi/L						
Cerium-141	U	-7.46	+/-10.1	14.6		pCi/L						
Cerium-144	U	-8.24	+/-23.7	42.0		pCi/L						
Cesium-134	U	-2.26	+/-4.81	7.21		pCi/L						
Cesium-136	U	6.31	+/-15.8	30.5		pCi/L						
Cesium-137	U	0.0226	+/-4.33	7.78	10.0	pCi/L						
Chromium-51	U	23.3	+/-47.8	86.8		pCi/L						
Cobalt-56	U	4.33	+/-5.14	10.2		pCi/L						
Cobalt-57	U	-0.396	+/-3.05	5.47		pCi/L						
Cobalt-58	U	-0.861	+/-4.10	7.58		pCi/L						
Cobalt-60	U	-1.7	+/-5.31	9.29		pCi/L						
Europium-152	U	-5.27	+/-11.4	19.1		pCi/L						
Europium-154	U	1.13	+/-12.2	20.2		pCi/L						
Europium-155	U	6.39	+/-13.1	22.9		pCi/L						
Iridium-192	U	1.63	+/-4.45	7.97		pCi/L						
Iron-59	U	-0.00973	+/-10.4	19.3		pCi/L						
Lead-210	U	-539	+/-1020	1560		pCi/L						
Lead-212	U	5.61	+/-11.3	16.2		pCi/L						
Lead-214	U	2.03	+/-11.0	16.3		pCi/L						
Manganese-54	U	0.539	+/-3.99	7.55		pCi/L						
Mercury-203	U	0.0684	+/-5.00	8.75		pCi/L						
Neodymium-147	U	39.0	+/-80.9	154		pCi/L						
Neptunium-239	U	-24.7	+/-31.8	55.5		pCi/L						
Niobium-94	U	-0.646	+/-4.18	7.34		pCi/L						
Niobium-95	U	3.22	+/-5.43	8.83		pCi/L						
Potassium-40	U	40.9	+/-50.0	73.3		pCi/L						
Promethium-144	U	0.888	+/-4.57	8.25		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 14	Project:	WNUC00124
Sample ID:	341588006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.108	+/-5.09	8.80	pCi/L
Radium-228	UI	0.00	+/-20.6	35.0	pCi/L
Ruthenium-106	U	-7.88	+/-34.9	61.9	pCi/L
Silver-110m	U	-1.82	+/-3.82	6.56	pCi/L
Sodium-22	U	0.399	+/-4.31	7.16	pCi/L
Thallium-208	U	1.30	+/-6.86	7.23	pCi/L
Thorium-230	U	-468	+/-1650	2800	pCi/L
Thorium-234	U	-352	+/-273	404	pCi/L
Tin-113	U	-3.26	+/-5.40	9.46	pCi/L
Uranium-235	U	-17.4	+/-29.3	43.0	pCi/L
Uranium-238	U	-352	+/-273	404	pCi/L
Yttrium-88	U	1.39	+/-4.59	9.50	pCi/L
Zinc-65	U	-3.17	+/-8.42	15.0	pCi/L
Zirconium-95	U	0.975	+/-7.87	14.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.01	+/-2.58	4.79	5.00	pCi/L	JAOC	01/31/14	1201	1362035	2
Beta		8.16	+/-2.88	3.78	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.9	+/-133	226	300	pCi/L	MYM1	01/28/14	1110	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	341588007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 13:45		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.6	+/-15.4	21.4		pCi/L		RXF2	02/04/14	0820 1361916	1
Americium-241	U	4.24	+/-20.0	34.1		pCi/L					
Antimony-124	U	-13.7	+/-10.9	10.5		pCi/L					
Antimony-125	U	9.16	+/-8.53	16.8		pCi/L					
Barium-133	U	-2.41	+/-4.61	7.02		pCi/L					
Barium-140	U	3.09	+/-9.66	19.6		pCi/L					
Beryllium-7	U	2.95	+/-32.1	58.5		pCi/L					
Bismuth-212	U	-17.6	+/-42.2	76.2		pCi/L					
Bismuth-214	U	11.0	+/-12.7	13.8		pCi/L					
Cerium-139	U	-0.974	+/-2.84	4.89		pCi/L					
Cerium-141	U	-0.0848	+/-8.71	12.4		pCi/L					
Cerium-144	U	-2.24	+/-18.4	32.6		pCi/L					
Cesium-134	U	-2.17	+/-3.44	6.01		pCi/L					
Cesium-136	U	8.33	+/-11.3	23.1		pCi/L					
Cesium-137	U	2.07	+/-3.25	6.24	10.0	pCi/L					
Chromium-51	U	-17.9	+/-38.9	69.0		pCi/L					
Cobalt-56	U	1.05	+/-5.05	7.70		pCi/L					
Cobalt-57	U	1.32	+/-2.44	4.49		pCi/L					
Cobalt-58	U	1.35	+/-3.33	6.58		pCi/L					
Cobalt-60	U	-1.31	+/-3.39	5.24		pCi/L					
Europium-152	U	5.63	+/-9.72	18.4		pCi/L					
Europium-154	U	1.14	+/-9.76	19.2		pCi/L					
Europium-155	U	-1.84	+/-10.2	18.2		pCi/L					
Iridium-192	U	-1.28	+/-3.57	6.38		pCi/L					
Iron-59	U	-0.291	+/-7.74	14.4		pCi/L					
Lead-210	U	-308	+/-844	1250		pCi/L					
Lead-212	U	-2.49	+/-7.20	11.6		pCi/L					
Lead-214	U	3.08	+/-12.3	14.7		pCi/L					
Manganese-54	U	-1.51	+/-3.33	5.91		pCi/L					
Mercury-203	U	-1.16	+/-4.19	7.02		pCi/L					
Neodymium-147	U	-4.72	+/-64.8	117		pCi/L					
Neptunium-239	U	-22.7	+/-29.1	43.9		pCi/L					
Niobium-94	U	4.31	+/-3.21	6.64		pCi/L					
Niobium-95	U	1.11	+/-3.43	6.70		pCi/L					
Potassium-40	U	26.6	+/-58.0	68.5		pCi/L					
Promethium-144	U	0.388	+/-3.18	6.01		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 15	Project:	WNUC00124
Sample ID:	341588007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.904	+/-3.98	7.35	pCi/L
Radium-228	U	11.6	+/-15.4	21.4	pCi/L
Ruthenium-106	U	-5.75	+/-31.4	50.7	pCi/L
Silver-110m	U	-2.04	+/-3.06	5.05	pCi/L
Sodium-22	U	-0.965	+/-3.64	6.79	pCi/L
Thallium-208	U	-3.31	+/-4.51	6.28	pCi/L
Thorium-230	U	525	+/-1810	2280	pCi/L
Thorium-234	U	61.0	+/-308	269	pCi/L
Tin-113	U	-1.49	+/-4.02	7.13	pCi/L
Uranium-235	U	0.225	+/-26.1	34.3	pCi/L
Uranium-238	U	61.0	+/-308	269	pCi/L
Yttrium-88	U	-0.495	+/-3.45	6.69	pCi/L
Zinc-65	U	-3.99	+/-8.42	12.2	pCi/L
Zirconium-95	U	4.16	+/-6.64	13.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.96	+/-2.48	4.12	5.00	pCi/L	JAOC	01/31/14	1201	1362035	2
Beta		241	+/-11.7	4.73	5.00	pCi/L					
Alpha	U	-0.854	+/-2.11	4.72	5.00	pCi/L	JAOC	02/03/14	1319	1362035	3
Beta		221	+/-11.0	4.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	483	+/-151	225	300	pCi/L	MYM1	01/28/14	1126	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 15  
Sample ID: 341588007

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 341588008  
Matrix: Ground Water  
Collect Date: 15-JAN-14 14:49  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.12	+/-19.1	27.9		pCi/L		RXF2	01/27/14	1358 1361916	1
Americium-241	U	-21.7	+/-20.1	34.2		pCi/L					
Antimony-124	U	4.41	+/-8.51	18.0		pCi/L					
Antimony-125	U	3.72	+/-11.8	21.5		pCi/L					
Barium-133	U	0.687	+/-6.18	9.72		pCi/L					
Barium-140	U	-3.61	+/-8.73	15.8		pCi/L					
Beryllium-7	U	-0.454	+/-38.3	68.2		pCi/L					
Bismuth-212	U	2.23	+/-75.9	104		pCi/L					
Bismuth-214	U	13.7	+/-13.1	14.6		pCi/L					
Cerium-139	U	2.11	+/-3.70	6.58		pCi/L					
Cerium-141	U	1.64	+/-10.5	11.9		pCi/L					
Cerium-144	U	-22.6	+/-26.6	41.0		pCi/L					
Cesium-134	U	1.54	+/-4.48	8.50		pCi/L					
Cesium-136	U	0.0724	+/-9.83	16.4		pCi/L					
Cesium-137	U	-2.24	+/-4.71	7.42	10.0	pCi/L					
Chromium-51	U	26.9	+/-44.8	82.7		pCi/L					
Cobalt-56	U	-0.574	+/-4.70	8.53		pCi/L					
Cobalt-57	U	-0.726	+/-3.16	5.48		pCi/L					
Cobalt-58	U	0.923	+/-4.77	8.86		pCi/L					
Cobalt-60	U	1.53	+/-3.81	7.48		pCi/L					
Europium-152	U	-4.81	+/-12.1	21.4		pCi/L					
Europium-154	U	-6.56	+/-14.5	19.7		pCi/L					
Europium-155	U	1.95	+/-12.5	22.3		pCi/L					
Iridium-192	U	1.37	+/-4.39	8.02		pCi/L					
Iron-59	U	0.796	+/-8.09	15.2		pCi/L					
Lead-210	U	-171	+/-596	942		pCi/L					
Lead-212	U	3.34	+/-11.3	14.3		pCi/L					
Lead-214	U	4.68	+/-14.5	19.0		pCi/L					
Manganese-54	U	-0.198	+/-4.43	8.07		pCi/L					
Mercury-203	U	0.706	+/-4.58	7.90		pCi/L					
Neodymium-147	U	39.8	+/-54.1	102		pCi/L					
Neptunium-239	U	22.8	+/-32.7	59.1		pCi/L					
Niobium-94	U	2.39	+/-4.32	7.89		pCi/L					
Niobium-95	U	0.840	+/-4.64	8.31		pCi/L					
Potassium-40	U	-22.3	+/-58.0	89.1		pCi/L					
Promethium-144	U	-0.603	+/-4.13	7.19		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 16  
Sample ID: 341588008

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.97	+/-4.97	9.26	pCi/L
Radium-228	U	2.12	+/-19.1	27.9	pCi/L
Ruthenium-106	U	0.822	+/-41.1	72.6	pCi/L
Silver-110m	U	-0.375	+/-3.96	6.98	pCi/L
Sodium-22	U	-2.35	+/-5.11	6.91	pCi/L
Thallium-208	U	5.11	+/-6.92	7.09	pCi/L
Thorium-230	U	595	+/-1920	2230	pCi/L
Thorium-234	U	-73.4	+/-208	312	pCi/L
Tin-113	U	-5.28	+/-8.89	10.0	pCi/L
Uranium-235	U	5.58	+/-35.9	37.4	pCi/L
Uranium-238	U	-73.4	+/-208	312	pCi/L
Yttrium-88	U	0.555	+/-3.48	7.16	pCi/L
Zinc-65	U	-3.61	+/-8.33	14.6	pCi/L
Zirconium-95	U	0.935	+/-8.07	14.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.311	+/-2.36	4.93	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta		22.4	+/-4.40	4.17	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	125	+/-136	229	300	pCi/L	MYM1	01/28/14	1143	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 341588009  
Matrix: Ground Water  
Collect Date: 15-JAN-14 10:11  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.55	+/-18.3	31.0		pCi/L		RXF2	02/04/14	0820 1361916	1
Americium-241	U	-13.6	+/-5.73	8.82		pCi/L					
Antimony-124	U	0.0499	+/-11.0	21.1		pCi/L					
Antimony-125	U	4.40	+/-9.32	17.7		pCi/L					
Barium-133	U	2.38	+/-4.57	7.42		pCi/L					
Barium-140	U	3.55	+/-13.2	26.2		pCi/L					
Beryllium-7	U	-14.5	+/-37.8	66.7		pCi/L					
Bismuth-212	U	25.5	+/-49.7	94.7		pCi/L					
Bismuth-214	UI	0.00	+/-21.6	17.7		pCi/L					
Cerium-139	U	0.797	+/-2.76	5.04		pCi/L					
Cerium-141	U	-7.51	+/-7.03	10.7		pCi/L					
Cerium-144	U	22.7	+/-17.6	28.7		pCi/L					
Cesium-134	U	-1.13	+/-4.23	7.10		pCi/L					
Cesium-136	U	-3.31	+/-13.8	24.8		pCi/L					
Cesium-137	U	-1.87	+/-4.33	7.41	10.0	pCi/L					
Chromium-51	U	6.03	+/-45.8	80.7		pCi/L					
Cobalt-56	U	-2.04	+/-4.72	8.05		pCi/L					
Cobalt-57	U	0.228	+/-2.30	3.94		pCi/L					
Cobalt-58	U	2.37	+/-4.54	8.84		pCi/L					
Cobalt-60	U	3.64	+/-5.53	9.86		pCi/L					
Europium-152	U	0.803	+/-10.2	15.9		pCi/L					
Europium-154	U	4.21	+/-11.1	22.3		pCi/L					
Europium-155	U	0.0705	+/-8.73	15.0		pCi/L					
Iridium-192	U	-1.04	+/-3.90	6.70		pCi/L					
Iron-59	U	-3.9	+/-9.81	17.2		pCi/L					
Lead-210	U	81.5	+/-90.9	82.6		pCi/L					
Lead-212	U	1.28	+/-8.02	10.7		pCi/L					
Lead-214	UI	0.00	+/-14.3	16.4		pCi/L					
Manganese-54	U	4.48	+/-4.78	7.41		pCi/L					
Mercury-203	U	2.87	+/-5.62	7.04		pCi/L					
Neodymium-147	U	-5.32	+/-78.0	141		pCi/L					
Neptunium-239	U	1.58	+/-23.1	39.6		pCi/L					
Niobium-94	U	-1.46	+/-4.06	6.43		pCi/L					
Niobium-95	U	-0.594	+/-4.38	8.06		pCi/L					
Potassium-40	U	2.27	+/-51.2	66.3		pCi/L					
Promethium-144	U	3.42	+/-3.97	7.62		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 17  
Sample ID: 341588009

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.49	+/-4.58	8.55	pCi/L
Radium-228	U	-3.55	+/-18.3	31.0	pCi/L
Ruthenium-106	U	13.8	+/-36.6	67.8	pCi/L
Silver-110m	U	2.80	+/-4.12	7.79	pCi/L
Sodium-22	U	1.55	+/-3.93	7.93	pCi/L
Thallium-208	U	1.44	+/-4.58	6.21	pCi/L
Thorium-230	U	-723	+/-568	845	pCi/L
Thorium-234	U	-55.1	+/-70.3	131	pCi/L
Tin-113	U	2.22	+/-4.94	9.31	pCi/L
Uranium-235	U	-25.9	+/-20.2	30.4	pCi/L
Uranium-238	U	-55.1	+/-70.3	131	pCi/L
Yttrium-88	U	2.53	+/-5.97	11.4	pCi/L
Zinc-65	U	-0.492	+/-8.85	16.1	pCi/L
Zirconium-95	U	1.59	+/-8.73	16.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.89	+/-3.99	4.98	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta		517	+/-17.0	3.40	5.00	pCi/L					
Alpha	U	0.145	+/-1.94	4.03	5.00	pCi/L	JAOC	02/03/14	1319	1362035	3
Beta		457	+/-15.6	4.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	869	+/-133	176	300	pCi/L	MYM1	02/04/14	0730	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 17	Project:	WNUC00124
Sample ID:	341588009	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 18	Project:	WNUC00124
Sample ID:	341588010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 12:34		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.6	+/-16.8	27.9		pCi/L		RXF2	02/04/14	0821 1361916	1
Americium-241	U	39.7	+/-30.5	53.0		pCi/L					
Antimony-124	U	-1.72	+/-7.60	14.8		pCi/L					
Antimony-125	U	-4.28	+/-8.95	15.4		pCi/L					
Barium-133	U	-0.853	+/-4.82	7.44		pCi/L					
Barium-140	U	5.04	+/-12.9	26.3		pCi/L					
Beryllium-7	U	3.50	+/-34.9	62.8		pCi/L					
Bismuth-212	U	14.6	+/-47.5	87.5		pCi/L					
Bismuth-214	U	1.61	+/-10.8	15.9		pCi/L					
Cerium-139	U	-2.06	+/-3.90	5.60		pCi/L					
Cerium-141	U	2.93	+/-9.15	14.1		pCi/L					
Cerium-144	U	2.48	+/-23.1	39.5		pCi/L					
Cesium-134	U	1.53	+/-3.79	7.20		pCi/L					
Cesium-136	U	6.43	+/-14.8	25.7		pCi/L					
Cesium-137	U	-1.26	+/-4.27	7.10	10.0	pCi/L					
Chromium-51	U	-67.3	+/-55.4	76.7		pCi/L					
Cobalt-56	U	-1.07	+/-4.10	7.39		pCi/L					
Cobalt-57	U	-0.335	+/-3.08	5.23		pCi/L					
Cobalt-58	U	0.190	+/-4.71	6.92		pCi/L					
Cobalt-60	U	-1.47	+/-3.73	6.51		pCi/L					
Europium-152	U	2.02	+/-10.7	19.3		pCi/L					
Europium-154	U	7.85	+/-10.2	21.1		pCi/L					
Europium-155	U	6.16	+/-11.9	21.0		pCi/L					
Iridium-192	UI	0.00	+/-6.72	7.59		pCi/L					
Iron-59	U	3.87	+/-9.10	17.7		pCi/L					
Lead-210	U	748	+/-1430	2310		pCi/L					
Lead-212	U	1.44	+/-9.69	12.6		pCi/L					
Lead-214	U	10.7	+/-12.8	15.9		pCi/L					
Manganese-54	U	3.03	+/-3.54	7.11		pCi/L					
Mercury-203	U	1.31	+/-4.13	7.59		pCi/L					
Neodymium-147	U	0.408	+/-77.1	138		pCi/L					
Neptunium-239	U	27.0	+/-31.6	56.5		pCi/L					
Niobium-94	U	1.67	+/-2.85	5.66		pCi/L					
Niobium-95	U	4.85	+/-6.54	7.53		pCi/L					
Potassium-40	U	8.29	+/-46.4	65.7		pCi/L					
Promethium-144	U	0.922	+/-2.97	5.75		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 341588010

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.12	+/-4.40	7.18	pCi/L
Radium-228	U	10.6	+/-16.8	27.9	pCi/L
Ruthenium-106	U	24.1	+/-32.5	61.7	pCi/L
Silver-110m	U	-5.74	+/-3.27	5.03	pCi/L
Sodium-22	U	2.31	+/-3.64	7.41	pCi/L
Thallium-208	U	-2.48	+/-4.22	6.61	pCi/L
Thorium-230	UI	0.00	+/-2910	3180	pCi/L
Thorium-234	U	54.6	+/-346	447	pCi/L
Tin-113	U	-0.0402	+/-4.80	8.56	pCi/L
Uranium-235	U	2.26	+/-25.8	40.8	pCi/L
Uranium-238	U	54.6	+/-346	447	pCi/L
Yttrium-88	U	-2.74	+/-5.56	8.11	pCi/L
Zinc-65	U	6.39	+/-5.85	11.5	pCi/L
Zirconium-95	U	-1.63	+/-6.92	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	12.3	+/-4.59	5.43	5.00	pCi/L	JAOC	02/03/14	1323	1362035	2
Beta	196	+/-7.15	4.34	5.00	pCi/L					
Alpha	13.4	+/-6.91	10.6	5.00	pCi/L	JAOC	02/04/14	1645	1362035	3
Beta	204	+/-7.39	3.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	297	+/-111	172	300	pCi/L	MYM1	02/04/14	0746	1363711	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.9	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 18  
Sample ID: 341588010

Project: WNUC00124  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	341588011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 13:32		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	14.8	+/-18.3	33.8		pCi/L		RXF2	02/04/14	0823 1361916	1
Americium-241	U	2.87	+/-31.7	50.0		pCi/L					
Antimony-124	U	0.00284	+/-9.13	18.0		pCi/L					
Antimony-125	U	-9.61	+/-10.3	17.3		pCi/L					
Barium-133	U	-0.495	+/-5.14	8.08		pCi/L					
Barium-140	U	0.233	+/-13.0	25.2		pCi/L					
Beryllium-7	U	19.1	+/-39.7	74.8		pCi/L					
Bismuth-212	U	-53.9	+/-67.8	95.1		pCi/L					
Bismuth-214	U	0.665	+/-10.3	17.1		pCi/L					
Cerium-139	U	-1.19	+/-3.83	5.67		pCi/L					
Cerium-141	U	5.37	+/-8.51	14.3		pCi/L					
Cerium-144	U	-9.56	+/-23.3	39.8		pCi/L					
Cesium-134	U	-0.48	+/-4.27	7.65		pCi/L					
Cesium-136	U	-5.47	+/-14.8	26.8		pCi/L					
Cesium-137	U	0.132	+/-3.95	7.20	10.0	pCi/L					
Chromium-51	U	0.306	+/-47.7	87.0		pCi/L					
Cobalt-56	U	-0.308	+/-4.57	8.20		pCi/L					
Cobalt-57	U	0.0377	+/-3.08	5.40		pCi/L					
Cobalt-58	U	-3.72	+/-4.48	7.37		pCi/L					
Cobalt-60	U	0.840	+/-4.16	8.08		pCi/L					
Europium-152	U	-5.77	+/-10.6	18.1		pCi/L					
Europium-154	U	-3.09	+/-9.76	18.0		pCi/L					
Europium-155	U	-3.37	+/-12.6	21.9		pCi/L					
Iridium-192	U	-0.00186	+/-3.93	7.17		pCi/L					
Iron-59	U	-4.75	+/-7.88	14.0		pCi/L					
Lead-210	U	-112	+/-1100	1720		pCi/L					
Lead-212	U	-12.2	+/-8.94	12.5		pCi/L					
Lead-214	U	10.2	+/-11.3	16.4		pCi/L					
Manganese-54	U	1.27	+/-4.24	6.71		pCi/L					
Mercury-203	U	4.86	+/-5.05	7.61		pCi/L					
Neodymium-147	U	77.5	+/-91.8	179		pCi/L					
Neptunium-239	U	-10	+/-33.4	57.4		pCi/L					
Niobium-94	U	-1.03	+/-4.22	6.37		pCi/L					
Niobium-95	U	-5.09	+/-6.05	8.60		pCi/L					
Potassium-40	U	-0.92	+/-45.4	79.0		pCi/L					
Promethium-144	U	3.65	+/-4.06	7.84		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 20	Project:	WNUC00124
Sample ID:	341588011	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.74	+/-4.43	7.68	pCi/L
Radium-228	U	14.8	+/-18.3	33.8	pCi/L
Ruthenium-106	U	10.8	+/-34.7	64.8	pCi/L
Silver-110m	U	0.621	+/-3.65	6.75	pCi/L
Sodium-22	U	-1.03	+/-3.47	6.41	pCi/L
Thallium-208	U	4.83	+/-7.48	6.81	pCi/L
Thorium-230	U	2670	+/-3030	2980	pCi/L
Thorium-234	U	331	+/-361	491	pCi/L
Tin-113	U	1.31	+/-5.77	9.36	pCi/L
Uranium-235	U	2.71	+/-27.4	39.1	pCi/L
Uranium-238	U	331	+/-361	491	pCi/L
Yttrium-88	U	0.908	+/-4.26	8.68	pCi/L
Zinc-65	U	0.219	+/-11.6	17.3	pCi/L
Zirconium-95	U	5.34	+/-8.40	14.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.0669	+/-1.62	3.31	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-2.81	+/-2.65	4.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	153	+/-134	222	300	pCi/L	MYM1	01/28/14	1232	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	341588012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 12:15		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.8	+/-15.2	26.1		pCi/L		RXF2	01/27/14	1400 1361916	1
Americium-241	U	2.75	+/-23.7	37.0		pCi/L					
Antimony-124	U	-1.97	+/-7.69	14.5		pCi/L					
Antimony-125	U	-7.08	+/-8.52	14.7		pCi/L					
Barium-133	U	-2.44	+/-4.87	7.03		pCi/L					
Barium-140	U	1.41	+/-7.74	15.3		pCi/L					
Beryllium-7	U	-28	+/-31.7	54.0		pCi/L					
Bismuth-212	U	-31.7	+/-53.7	84.1		pCi/L					
Bismuth-214	U	6.48	+/-10.2	15.2		pCi/L					
Cerium-139	U	1.05	+/-3.05	5.54		pCi/L					
Cerium-141	U	2.46	+/-5.86	10.7		pCi/L					
Cerium-144	U	-13.5	+/-23.4	35.7		pCi/L					
Cesium-134	U	2.05	+/-4.19	6.98		pCi/L					
Cesium-136	U	-3.31	+/-7.10	12.7		pCi/L					
Cesium-137	U	-4.19	+/-4.70	7.15	10.0	pCi/L					
Chromium-51	U	-33.7	+/-40.6	57.1		pCi/L					
Cobalt-56	U	1.24	+/-3.76	6.96		pCi/L					
Cobalt-57	U	2.92	+/-2.69	4.82		pCi/L					
Cobalt-58	U	-1.68	+/-3.54	6.05		pCi/L					
Cobalt-60	U	-0.113	+/-3.57	6.63		pCi/L					
Europium-152	U	2.22	+/-9.91	17.6		pCi/L					
Europium-154	U	-1.03	+/-10.2	18.8		pCi/L					
Europium-155	U	1.71	+/-10.9	18.7		pCi/L					
Iridium-192	U	3.59	+/-3.29	6.00		pCi/L					
Iron-59	U	1.05	+/-7.42	14.1		pCi/L					
Lead-210	U	-951	+/-757	1090		pCi/L					
Lead-212	U	8.85	+/-9.53	12.9		pCi/L					
Lead-214	U	8.05	+/-13.7	16.1		pCi/L					
Manganese-54	U	-2.15	+/-3.09	5.12		pCi/L					
Mercury-203	U	3.28	+/-3.68	6.83		pCi/L					
Neodymium-147	U	-6.3	+/-43.5	78.9		pCi/L					
Neptunium-239	U	5.90	+/-29.0	49.6		pCi/L					
Niobium-94	U	-1.01	+/-3.40	5.94		pCi/L					
Niobium-95	U	1.65	+/-3.46	6.55		pCi/L					
Potassium-40	U	52.5	+/-62.9	60.4		pCi/L					
Promethium-144	U	-2.41	+/-5.16	6.48		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 22 Project: WNUC00124  
Sample ID: 341588012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.328	+/-3.96	7.31	pCi/L
Radium-228	U	-11.8	+/-15.2	26.1	pCi/L
Ruthenium-106	U	-25.9	+/-28.9	48.1	pCi/L
Silver-110m	U	-3.08	+/-3.35	5.55	pCi/L
Sodium-22	U	-0.572	+/-3.64	6.65	pCi/L
Thallium-208	U	1.16	+/-4.81	7.17	pCi/L
Thorium-230	U	-391	+/-1490	2260	pCi/L
Thorium-234	U	173	+/-241	285	pCi/L
Tin-113	U	-2.13	+/-4.42	7.41	pCi/L
Uranium-235	U	-27.3	+/-22.5	35.6	pCi/L
Uranium-238	U	173	+/-241	285	pCi/L
Yttrium-88	U	1.18	+/-3.73	7.66	pCi/L
Zinc-65	U	1.40	+/-8.65	12.9	pCi/L
Zirconium-95	U	2.58	+/-6.15	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	11.9	+/-4.39	4.94	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	52.1	+/-4.21	2.52	5.00	pCi/L					
Alpha	8.63	+/-3.86	4.98	5.00	pCi/L	JAOC	02/03/14	1320	1362035	3
Beta	56.7	+/-4.45	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	179	+/-134	220	300	pCi/L	MYM1	01/31/14	1206	1361889	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID:	WELL 22	Project:	WNUC00124
Sample ID:	341588012	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 341588013  
Matrix: Ground Water  
Collect Date: 15-JAN-14 14:05  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.01	+/-14.6	23.1		pCi/L		RXF2	01/27/14	1400 1361916	1
Americium-241	U	2.38	+/-18.4	28.8		pCi/L					
Antimony-124	U	4.38	+/-7.15	15.4		pCi/L					
Antimony-125	U	-0.521	+/-9.08	16.1		pCi/L					
Barium-133	U	1.60	+/-4.55	7.35		pCi/L					
Barium-140	U	0.0104	+/-6.16	11.6		pCi/L					
Beryllium-7	U	14.2	+/-31.6	57.6		pCi/L					
Bismuth-212	U	-1.52	+/-44.2	81.9		pCi/L					
Bismuth-214	U	3.25	+/-9.16	14.4		pCi/L					
Cerium-139	U	-1.35	+/-3.02	4.97		pCi/L					
Cerium-141	U	2.75	+/-7.06	10.9		pCi/L					
Cerium-144	U	-8.2	+/-20.2	33.6		pCi/L					
Cesium-134	U	2.11	+/-3.23	6.39		pCi/L					
Cesium-136	U	-0.526	+/-7.22	13.3		pCi/L					
Cesium-137	U	2.10	+/-3.52	6.51	10.0	pCi/L					
Chromium-51	U	17.7	+/-33.0	60.9		pCi/L					
Cobalt-56	U	-0.336	+/-3.47	6.37		pCi/L					
Cobalt-57	U	-1.26	+/-2.58	4.28		pCi/L					
Cobalt-58	U	-3.3	+/-3.13	5.22		pCi/L					
Cobalt-60	U	2.09	+/-3.37	6.74		pCi/L					
Europium-152	U	-0.995	+/-8.92	15.9		pCi/L					
Europium-154	U	-9.96	+/-11.7	15.7		pCi/L					
Europium-155	U	-0.19	+/-10.6	18.1		pCi/L					
Iridium-192	U	1.50	+/-3.34	6.12		pCi/L					
Iron-59	U	0.396	+/-7.28	13.5		pCi/L					
Lead-210	U	162	+/-762	738		pCi/L					
Lead-212	U	0.223	+/-8.33	11.1		pCi/L					
Lead-214	U	3.76	+/-11.2	15.1		pCi/L					
Manganese-54	U	-1.33	+/-2.91	5.19		pCi/L					
Mercury-203	U	-1.82	+/-3.54	6.16		pCi/L					
Neodymium-147	U	-27.1	+/-41.7	69.9		pCi/L					
Neptunium-239	U	-26.1	+/-28.0	45.4		pCi/L					
Niobium-94	U	-0.825	+/-3.40	5.81		pCi/L					
Niobium-95	U	-2.07	+/-2.97	5.18		pCi/L					
Potassium-40	U	20.7	+/-65.9	60.0		pCi/L					
Promethium-144	U	3.55	+/-3.18	6.13		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 23R  
Sample ID: 341588013

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.250	+/-3.91	7.00	pCi/L
Radium-228	U	-7.01	+/-14.6	23.1	pCi/L
Ruthenium-106	U	-14.6	+/-30.1	50.8	pCi/L
Silver-110m	U	-2.43	+/-3.37	5.53	pCi/L
Sodium-22	U	-3.51	+/-4.14	5.54	pCi/L
Thallium-208	U	0.205	+/-6.23	5.03	pCi/L
Thorium-230	U	246	+/-1270	1990	pCi/L
Thorium-234	U	105	+/-292	281	pCi/L
Tin-113	U	1.88	+/-4.08	7.51	pCi/L
Uranium-235	U	26.8	+/-33.8	38.8	pCi/L
Uranium-238	U	105	+/-292	281	pCi/L
Yttrium-88	U	2.30	+/-2.70	6.35	pCi/L
Zinc-65	U	-0.131	+/-7.66	12.8	pCi/L
Zirconium-95	U	-0.801	+/-5.34	9.88	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.712	+/-2.60	4.99	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-1.17	+/-1.85	3.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.6	+/-136	232	300	pCi/L	MYM1	01/28/14	1304	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 24	Project:	WNUC00124
Sample ID:	341588014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 11:26		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.76	+/-17.9	26.3		pCi/L		RXF2	02/04/14	0836 1361916	1
Americium-241	U	-6.41	+/-13.6	22.8		pCi/L					
Antimony-124	U	-4.24	+/-10.2	18.1		pCi/L					
Antimony-125	U	-5.63	+/-8.53	14.1		pCi/L					
Barium-133	U	1.45	+/-4.46	7.09		pCi/L					
Barium-140	U	-4.39	+/-13.5	20.5		pCi/L					
Beryllium-7	U	15.4	+/-32.3	59.0		pCi/L					
Bismuth-212	U	28.4	+/-45.0	87.0		pCi/L					
Bismuth-214	U	5.97	+/-10.3	11.0		pCi/L					
Cerium-139	U	-0.828	+/-2.70	4.77		pCi/L					
Cerium-141	U	-2.01	+/-6.55	11.2		pCi/L					
Cerium-144	U	0.737	+/-18.0	32.6		pCi/L					
Cesium-134	U	-1.08	+/-3.11	5.52		pCi/L					
Cesium-136	U	7.25	+/-7.84	21.2		pCi/L					
Cesium-137	U	-4.09	+/-4.24	6.69	10.0	pCi/L					
Chromium-51	U	28.0	+/-41.9	77.1		pCi/L					
Cobalt-56	U	0.0941	+/-3.64	6.67		pCi/L					
Cobalt-57	U	-0.563	+/-2.23	3.99		pCi/L					
Cobalt-58	U	1.20	+/-4.03	6.70		pCi/L					
Cobalt-60	U	-2.19	+/-3.64	6.45		pCi/L					
Europium-152	U	5.24	+/-9.45	16.7		pCi/L					
Europium-154	U	-1.36	+/-9.51	15.4		pCi/L					
Europium-155	U	1.76	+/-9.44	16.2		pCi/L					
Iridium-192	U	-1.49	+/-3.60	6.16		pCi/L					
Iron-59	U	-5.14	+/-7.50	12.4		pCi/L					
Lead-210	U	-91.2	+/-318	485		pCi/L					
Lead-212	U	0.848	+/-8.03	10.3		pCi/L					
Lead-214	U	1.14	+/-9.77	14.1		pCi/L					
Manganese-54	U	2.14	+/-3.28	6.35		pCi/L					
Mercury-203	U	-1.71	+/-3.78	6.49		pCi/L					
Neodymium-147	U	88.7	+/-75.6	150		pCi/L					
Neptunium-239	U	8.07	+/-22.7	42.0		pCi/L					
Niobium-94	U	-1.48	+/-2.99	5.22		pCi/L					
Niobium-95	U	-0.333	+/-3.71	6.74		pCi/L					
Potassium-40	U	31.2	+/-43.7	64.5		pCi/L					
Promethium-144	U	2.50	+/-3.02	5.93		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 24

Sample ID: 341588014

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.33	+/-3.93	7.08	pCi/L
Radium-228	U	3.76	+/-17.9	26.3	pCi/L
Ruthenium-106	U	6.90	+/-28.3	53.2	pCi/L
Silver-110m	U	-2.54	+/-3.09	5.25	pCi/L
Sodium-22	U	-0.381	+/-3.38	5.51	pCi/L
Thallium-208	U	1.14	+/-4.04	6.70	pCi/L
Thorium-230	U	-592	+/-898	1480	pCi/L
Thorium-234	U	-16.2	+/-140	229	pCi/L
Tin-113	U	0.304	+/-4.43	7.82	pCi/L
Uranium-235	U	-2.93	+/-23.0	33.2	pCi/L
Uranium-238	U	-16.2	+/-140	229	pCi/L
Yttrium-88	U	0.502	+/-4.29	8.32	pCi/L
Zinc-65	U	-2.99	+/-7.23	10.5	pCi/L
Zirconium-95	U	5.25	+/-4.78	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.30	+/-2.64	4.81	5.00	pCi/L	JAOC	01/31/14	1313	1362035	2
Beta	U	-0.132	+/-1.76	3.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	24.9	+/-130	226	300	pCi/L	MYM1	01/28/14	1320	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 26	Project:	WNUC00124
Sample ID:	341588015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 10:21		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.12	+/-17.6	25.3		pCi/L		RXF2	02/04/14	0837 1361916	1
Americium-241	U	7.46	+/-21.3	36.0		pCi/L					
Antimony-124	U	-2.93	+/-11.5	21.1		pCi/L					
Antimony-125	U	-3.67	+/-8.74	15.2		pCi/L					
Barium-133	U	1.27	+/-4.57	7.51		pCi/L					
Barium-140	U	-6.39	+/-11.3	20.0		pCi/L					
Beryllium-7	U	2.22	+/-33.3	60.4		pCi/L					
Bismuth-212	U	-26.9	+/-37.5	65.4		pCi/L					
Bismuth-214	U	8.56	+/-12.3	13.2		pCi/L					
Cerium-139	U	0.402	+/-3.15	4.95		pCi/L					
Cerium-141	U	-12.4	+/-7.11	11.1		pCi/L					
Cerium-144	U	-3.08	+/-17.9	31.2		pCi/L					
Cesium-134	U	1.76	+/-3.81	7.41		pCi/L					
Cesium-136	U	-0.962	+/-13.1	24.1		pCi/L					
Cesium-137	U	1.11	+/-3.66	6.69	10.0	pCi/L					
Chromium-51	U	21.8	+/-39.6	75.2		pCi/L					
Cobalt-56	U	-0.867	+/-3.59	6.55		pCi/L					
Cobalt-57	U	-1.57	+/-2.59	4.40		pCi/L					
Cobalt-58	U	2.67	+/-3.88	6.44		pCi/L					
Cobalt-60	U	1.70	+/-3.40	7.04		pCi/L					
Europium-152	U	2.63	+/-9.57	17.7		pCi/L					
Europium-154	U	-4.67	+/-11.4	16.5		pCi/L					
Europium-155	U	-1.53	+/-9.59	16.9		pCi/L					
Iridium-192	U	0.641	+/-3.38	6.27		pCi/L					
Iron-59	U	11.9	+/-14.3	16.6		pCi/L					
Lead-210	U	173	+/-656	1230		pCi/L					
Lead-212	U	6.22	+/-8.86	11.8		pCi/L					
Lead-214	UI	0.00	+/-16.6	14.7		pCi/L					
Manganese-54	U	1.26	+/-3.20	6.24		pCi/L					
Mercury-203	U	3.26	+/-5.15	6.72		pCi/L					
Neodymium-147	U	-21	+/-84.4	148		pCi/L					
Neptunium-239	U	-1.12	+/-27.0	42.8		pCi/L					
Niobium-94	U	-0.74	+/-2.97	5.43		pCi/L					
Niobium-95	U	-1.83	+/-4.79	7.83		pCi/L					
Potassium-40	U	11.9	+/-51.7	95.0		pCi/L					
Promethium-144	U	0.479	+/-3.15	5.98		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 26 Project: WNUC00124  
Sample ID: 341588015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.65	+/-4.17	7.24	pCi/L
Radium-228	U	-4.12	+/-17.6	25.3	pCi/L
Ruthenium-106	U	-25.3	+/-30.8	49.9	pCi/L
Silver-110m	U	1.27	+/-3.33	6.17	pCi/L
Sodium-22	U	-1.6	+/-4.03	5.87	pCi/L
Thallium-208	U	-3.97	+/-4.12	6.59	pCi/L
Thorium-230	U	-1350	+/-1550	2330	pCi/L
Thorium-234	U	64.0	+/-295	378	pCi/L
Tin-113	U	-2.9	+/-4.38	7.51	pCi/L
Uranium-235	U	-9.55	+/-22.6	36.9	pCi/L
Uranium-238	U	64.0	+/-295	378	pCi/L
Yttrium-88	U	0.960	+/-4.13	8.39	pCi/L
Zinc-65	U	-3.17	+/-7.80	11.5	pCi/L
Zirconium-95	U	-0.302	+/-6.08	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.529	+/-2.41	4.72	5.00	pCi/L	JAOC	01/31/14	1314	1362035	2
Beta		17.4	+/-3.80	3.92	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	160	+/-148	246	300	pCi/L	MYM1	01/28/14	1337	1361889	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			85.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 27  
Sample ID: 341588016  
Matrix: Ground Water  
Collect Date: 13-JAN-14 14:29  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.32	+/-16.2	29.2		pCi/L		RXF2	01/27/14	1401 1361916	1
Americium-241	U	10.5	+/-27.6	50.7		pCi/L					
Antimony-124	U	3.83	+/-9.26	19.7		pCi/L					
Antimony-125	U	-9.04	+/-10.1	16.8		pCi/L					
Barium-133	U	3.08	+/-4.70	8.06		pCi/L					
Barium-140	U	-10.7	+/-9.85	15.7		pCi/L					
Beryllium-7	U	18.5	+/-34.0	64.1		pCi/L					
Bismuth-212	U	0.885	+/-47.9	90.5		pCi/L					
Bismuth-214	U	15.5	+/-9.25	16.8		pCi/L					
Cerium-139	U	-3.67	+/-3.31	5.28		pCi/L					
Cerium-141	UI	0.00	+/-13.0	10.7		pCi/L					
Cerium-144	U	-4.6	+/-22.4	38.4		pCi/L					
Cesium-134	U	-2.93	+/-3.52	5.99		pCi/L					
Cesium-136	U	-6.97	+/-9.99	16.9		pCi/L					
Cesium-137	U	0.845	+/-3.73	6.85	10.0	pCi/L					
Chromium-51	U	-26.7	+/-40.2	69.4		pCi/L					
Cobalt-56	U	-0.00894	+/-4.11	7.67		pCi/L					
Cobalt-57	U	2.18	+/-2.78	5.07		pCi/L					
Cobalt-58	U	-1.6	+/-3.61	6.47		pCi/L					
Cobalt-60	U	0.996	+/-3.57	7.09		pCi/L					
Europium-152	U	6.30	+/-10.4	19.7		pCi/L					
Europium-154	U	-6.2	+/-12.4	21.2		pCi/L					
Europium-155	U	7.83	+/-11.3	20.8		pCi/L					
Iridium-192	U	0.335	+/-3.73	6.80		pCi/L					
Iron-59	U	3.25	+/-7.71	15.4		pCi/L					
Lead-210	U	524	+/-2200	1790		pCi/L					
Lead-212	U	6.04	+/-12.4	13.4		pCi/L					
Lead-214	U	6.44	+/-14.5	16.5		pCi/L					
Manganese-54	U	0.604	+/-3.32	6.39		pCi/L					
Mercury-203	U	-2.41	+/-4.00	6.99		pCi/L					
Neodymium-147	U	-1.41	+/-52.3	94.2		pCi/L					
Neptunium-239	U	2.23	+/-30.3	53.1		pCi/L					
Niobium-94	U	-1.69	+/-3.81	5.84		pCi/L					
Niobium-95	U	4.13	+/-3.83	7.96		pCi/L					
Potassium-40	U	-27.2	+/-50.3	90.7		pCi/L					
Promethium-144	U	2.34	+/-3.62	7.13		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID: WELL 27 Project: WNUC00124  
Sample ID: 341588016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.14	+/-4.29	7.57	pCi/L
Radium-228	U	-2.32	+/-16.2	29.2	pCi/L
Ruthenium-106	U	19.0	+/-34.5	64.9	pCi/L
Silver-110m	U	0.681	+/-3.57	6.52	pCi/L
Sodium-22	U	-2.25	+/-4.35	7.45	pCi/L
Thallium-208	U	1.60	+/-6.75	6.67	pCi/L
Thorium-230	U	-1150	+/-1500	2570	pCi/L
Thorium-234	U	-106	+/-267	393	pCi/L
Tin-113	U	0.0615	+/-4.48	8.14	pCi/L
Uranium-235	UI	0.00	+/-42.3	35.0	pCi/L
Uranium-238	U	-106	+/-267	393	pCi/L
Yttrium-88	U	0.338	+/-4.74	9.35	pCi/L
Zinc-65	U	1.21	+/-8.68	16.3	pCi/L
Zirconium-95	U	0.828	+/-7.10	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.67	+/-2.83	4.98	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		11.6	+/-2.83	3.11	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.6	+/-111	190	300	pCi/L	MYM1	01/31/14	1026	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			102	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	341588017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 13:50		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.5	+/-18.3	31.0		pCi/L		RXF2	01/28/14	0847 1361916	1
Americium-241	U	-3.06	+/-28.9	51.9		pCi/L					
Antimony-124	U	-4.29	+/-8.58	15.4		pCi/L					
Antimony-125	U	-2.12	+/-8.92	15.8		pCi/L					
Barium-133	U	-1.44	+/-5.34	8.22		pCi/L					
Barium-140	U	-3.67	+/-8.16	14.8		pCi/L					
Beryllium-7	U	20.6	+/-36.2	68.0		pCi/L					
Bismuth-212	U	5.57	+/-50.8	96.3		pCi/L					
Bismuth-214	U	10.6	+/-14.1	16.5		pCi/L					
Cerium-139	U	0.308	+/-3.17	5.50		pCi/L					
Cerium-141	U	-1.26	+/-7.87	11.4		pCi/L					
Cerium-144	U	-6.28	+/-19.8	33.9		pCi/L					
Cesium-134	U	1.11	+/-3.85	7.49		pCi/L					
Cesium-136	U	-4.23	+/-11.5	17.1		pCi/L					
Cesium-137	U	1.06	+/-4.39	6.40	10.0	pCi/L					
Chromium-51	U	-17.4	+/-39.6	69.5		pCi/L					
Cobalt-56	U	3.36	+/-3.73	7.76		pCi/L					
Cobalt-57	U	0.800	+/-2.60	4.66		pCi/L					
Cobalt-58	U	1.64	+/-3.61	7.20		pCi/L					
Cobalt-60	U	4.42	+/-4.08	8.55		pCi/L					
Europium-152	U	-6.25	+/-9.47	16.3		pCi/L					
Europium-154	U	-1.1	+/-9.64	18.0		pCi/L					
Europium-155	U	2.69	+/-10.5	19.0		pCi/L					
Iridium-192	U	-0.292	+/-3.63	6.57		pCi/L					
Iron-59	U	-3.76	+/-9.46	14.0		pCi/L					
Lead-210	UI	0.00	+/-2910	2090		pCi/L					
Lead-212	U	-1.03	+/-7.90	12.8		pCi/L					
Lead-214	U	2.92	+/-15.5	16.1		pCi/L					
Manganese-54	U	-1.36	+/-3.33	5.95		pCi/L					
Mercury-203	U	-1.92	+/-3.89	6.85		pCi/L					
Neodymium-147	U	34.3	+/-57.5	106		pCi/L					
Neptunium-239	U	18.0	+/-26.7	49.2		pCi/L					
Niobium-94	U	-3.54	+/-3.38	5.63		pCi/L					
Niobium-95	U	0.214	+/-3.90	7.35		pCi/L					
Potassium-40	UI	0.00	+/-67.6	63.5		pCi/L					
Promethium-144	U	-1.25	+/-3.92	7.06		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 28	Project:	WNUC00124
Sample ID:	341588017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.5	+/-4.14	7.24	pCi/L
Radium-228	U	12.5	+/-18.3	31.0	pCi/L
Ruthenium-106	U	8.18	+/-33.3	61.2	pCi/L
Silver-110m	U	-3.73	+/-3.98	5.58	pCi/L
Sodium-22	U	0.0486	+/-3.24	6.39	pCi/L
Thallium-208	U	-4.95	+/-5.62	7.94	pCi/L
Thorium-230	U	-1830	+/-1910	2930	pCi/L
Thorium-234	U	-56.9	+/-260	429	pCi/L
Tin-113	U	3.83	+/-4.46	8.69	pCi/L
Uranium-235	U	-5.72	+/-25.2	36.4	pCi/L
Uranium-238	U	-56.9	+/-260	429	pCi/L
Yttrium-88	U	0.295	+/-5.11	9.96	pCi/L
Zinc-65	U	0.802	+/-7.88	14.9	pCi/L
Zirconium-95	U	-5.32	+/-6.65	11.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	11.6	+/-4.22	4.99	5.00	pCi/L	JAOC	02/02/14	1748	1362036	2
Beta	27.6	+/-3.08	2.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-63.5	+/-110	198	300	pCi/L	MYM1	01/31/14	1043	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 29	Project:	WNUC00124
Sample ID:	341588018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 11:37		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.87	+/-20.6	36.1		pCi/L					
Americium-241	U	-0.667	+/-6.34	10.5		pCi/L					
Antimony-124	U	1.50	+/-13.7	23.8		pCi/L					
Antimony-125	U	-2.2	+/-10.1	18.1		pCi/L					
Barium-133	U	4.86	+/-5.39	9.45		pCi/L					
Barium-140	U	-5.46	+/-15.8	29.1		pCi/L					
Beryllium-7	U	-19.5	+/-38.6	66.9		pCi/L					
Bismuth-212	U	6.64	+/-57.6	110		pCi/L					
Bismuth-214		21.8	+/-15.7	13.5		pCi/L					
Cerium-139	U	-0.974	+/-2.91	5.03		pCi/L					
Cerium-141	U	-7.14	+/-7.65	11.5		pCi/L					
Cerium-144	U	2.91	+/-19.3	31.4		pCi/L					
Cesium-134	U	-3.29	+/-5.04	8.79		pCi/L					
Cesium-136	U	1.70	+/-17.1	32.4		pCi/L					
Cesium-137	U	1.80	+/-4.37	8.22	10.0	pCi/L					
Chromium-51	U	-8.62	+/-48.7	78.0		pCi/L					
Cobalt-56	U	1.28	+/-4.78	9.27		pCi/L					
Cobalt-57	U	1.28	+/-2.38	4.00		pCi/L					
Cobalt-58	U	0.363	+/-4.85	9.21		pCi/L					
Cobalt-60	U	2.51	+/-4.38	9.28		pCi/L					
Europium-152	U	-1.29	+/-9.41	17.2		pCi/L					
Europium-154	U	-1.46	+/-11.8	22.0		pCi/L					
Europium-155	U	0.961	+/-8.79	15.9		pCi/L					
Iridium-192	U	-1.5	+/-3.95	6.85		pCi/L					
Iron-59	U	4.60	+/-11.5	22.5		pCi/L					
Lead-210	U	-53.9	+/-89.3	145		pCi/L					
Lead-212	U	-5.97	+/-9.01	13.4		pCi/L					
Lead-214	U	6.84	+/-13.7	18.6		pCi/L					
Manganese-54	U	-2.22	+/-4.06	7.16		pCi/L					
Mercury-203	U	-0.251	+/-4.77	8.15		pCi/L					
Neodymium-147	U	-19.8	+/-97.8	173		pCi/L					
Neptunium-239	U	-1.01	+/-23.4	41.8		pCi/L					
Niobium-94	U	-4.07	+/-4.27	6.75		pCi/L					
Niobium-95	U	2.38	+/-4.82	9.56		pCi/L					
Potassium-40	U	3.85	+/-62.1	81.6		pCi/L					
Promethium-144	U	4.02	+/-4.31	8.42		pCi/L					

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 29

Sample ID: 341588018

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.655	+/-4.93	8.86	pCi/L
Radium-228	U	-3.87	+/-20.6	36.1	pCi/L
Ruthenium-106	U	-15.8	+/-33.8	57.9	pCi/L
Silver-110m	U	-0.476	+/-4.03	7.16	pCi/L
Sodium-22	U	-0.547	+/-4.18	7.75	pCi/L
Thallium-208	U	-2.17	+/-5.43	9.37	pCi/L
Thorium-230	U	445	+/-522	994	pCi/L
Thorium-234	U	-51.2	+/-83.3	131	pCi/L
Tin-113	U	3.37	+/-4.98	9.61	pCi/L
Uranium-235	U	-14.6	+/-23.2	32.9	pCi/L
Uranium-238	U	-51.2	+/-83.3	131	pCi/L
Yttrium-88	U	-0.52	+/-5.00	9.79	pCi/L
Zinc-65	U	-0.145	+/-10.7	19.7	pCi/L
Zirconium-95	U	-0.102	+/-8.02	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.359	+/-2.40	4.91	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		13.1	+/-2.46	2.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	9.72	+/-110	192	300	pCi/L	MYM1	01/31/14	1100	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 11:58		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		12.0	+/-1.99	0.519	1.00	pCi/L		MXS2	02/08/14	1257 1364996	1
Uranium-235/236		0.631	+/-0.547	0.315	1.00	pCi/L					
Uranium-238		2.19	+/-0.887	0.596	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.20	+/-16.7	23.4		pCi/L		RXF2	02/04/14	0855 1361916	2
Americium-241	U	3.67	+/-18.3	28.9		pCi/L					
Antimony-124	U	1.59	+/-7.84	16.0		pCi/L					
Antimony-125	U	-3.25	+/-8.18	14.2		pCi/L					
Barium-133	U	0.677	+/-4.32	6.89		pCi/L					
Barium-140	U	-4.3	+/-9.17	16.0		pCi/L					
Beryllium-7	U	-13.9	+/-38.2	59.9		pCi/L					
Bismuth-212	U	38.4	+/-42.8	85.5		pCi/L					
Bismuth-214	U	-4.42	+/-8.36	12.9		pCi/L					
Cerium-139	U	0.537	+/-3.22	5.48		pCi/L					
Cerium-141	U	6.03	+/-7.14	12.6		pCi/L					
Cerium-144	U	8.35	+/-20.0	34.7		pCi/L					
Cesium-134	U	0.511	+/-3.34	5.61		pCi/L					
Cesium-136	U	3.47	+/-11.5	22.1		pCi/L					
Cesium-137	U	1.84	+/-3.47	5.79	10.0	pCi/L					
Chromium-51	U	25.3	+/-42.1	77.8		pCi/L					
Cobalt-56	U	-1.18	+/-3.35	6.04		pCi/L					
Cobalt-57	U	-1.95	+/-2.74	4.49		pCi/L					
Cobalt-58	U	-2.12	+/-4.04	6.06		pCi/L					
Cobalt-60	U	0.914	+/-2.97	5.84		pCi/L					
Europium-152	U	-6.67	+/-11.0	16.3		pCi/L					
Europium-154	U	-4.13	+/-11.1	15.4		pCi/L					
Europium-155	U	-1.87	+/-10.4	17.6		pCi/L					
Iridium-192	U	-2.18	+/-3.79	5.66		pCi/L					
Iron-59	U	-4.61	+/-6.80	11.6		pCi/L					
Lead-210	U	103	+/-646	733		pCi/L					
Lead-212	U	5.29	+/-8.22	11.4		pCi/L					
Lead-214	U	6.00	+/-11.2	14.7		pCi/L					
Manganese-54	U	1.93	+/-2.85	5.68		pCi/L					
Mercury-203	U	2.36	+/-4.09	7.54		pCi/L					
Neodymium-147	U	-12.9	+/-70.9	124		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	-14.4	+/-26.3	43.5	pCi/L
Niobium-94	U	-0.613	+/-3.10	5.33	pCi/L
Niobium-95	U	3.22	+/-3.74	7.43	pCi/L
Potassium-40	U	31.8	+/-58.5	50.2	pCi/L
Promethium-144	U	1.02	+/-3.29	5.93	pCi/L
Promethium-146	U	1.08	+/-3.71	6.79	pCi/L
Radium-228	U	2.20	+/-16.7	23.4	pCi/L
Ruthenium-106	U	-47	+/-31.1	47.0	pCi/L
Silver-110m	U	2.61	+/-4.20	5.76	pCi/L
Sodium-22	U	-1.51	+/-3.91	5.42	pCi/L
Thallium-208	U	-5.58	+/-5.09	6.52	pCi/L
Thorium-230	U	-688	+/-1310	1960	pCi/L
Thorium-234	U	84.3	+/-273	295	pCi/L
Tin-113	U	4.81	+/-4.27	8.20	pCi/L
Uranium-235	U	-8.64	+/-25.8	36.2	pCi/L
Uranium-238	U	84.3	+/-273	295	pCi/L
Yttrium-88	U	4.74	+/-2.58	7.38	pCi/L
Zinc-65	U	5.27	+/-7.00	14.0	pCi/L
Zirconium-95	U	-2.13	+/-6.79	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	18.5	+/-6.30	4.89	5.00	pCi/L	JAOC	02/02/14	1748	1362036	3
Beta	35.3	+/-4.17	2.77	5.00	pCi/L					
Alpha	13.0	+/-4.00	4.96	5.00	pCi/L	JAOC	02/04/14	1648	1362036	4
Beta	42.3	+/-3.36	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	98.0	+/-118	198	300	pCi/L	MYM1	01/31/14	1116	1361891	5
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# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 30	Project:	WNUC00124
Sample ID:	341588019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			85.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 32  
Sample ID: 341588020  
Matrix: Ground Water  
Collect Date: 14-JAN-14 15:16  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	9.04	+/-14.7	22.8		pCi/L		RXF2	01/28/14	0842 1361916	1
Americium-241	U	-7.44	+/-11.3	18.6		pCi/L					
Antimony-124	U	-5.98	+/-9.17	12.5		pCi/L					
Antimony-125	U	-3.26	+/-8.58	14.5		pCi/L					
Barium-133	U	-0.049	+/-4.33	6.64		pCi/L					
Barium-140	U	1.18	+/-9.23	15.5		pCi/L					
Beryllium-7	U	-6.22	+/-28.7	52.1		pCi/L					
Bismuth-212	U	-14.4	+/-51.1	80.8		pCi/L					
Bismuth-214	UI	0.00	+/-12.2	14.6		pCi/L					
Cerium-139	U	-1.78	+/-2.61	4.49		pCi/L					
Cerium-141	U	8.82	+/-5.20	9.88		pCi/L					
Cerium-144	U	-8.7	+/-17.6	29.7		pCi/L					
Cesium-134	U	2.46	+/-3.59	6.55		pCi/L					
Cesium-136	U	-1.05	+/-7.47	13.5		pCi/L					
Cesium-137	U	-0.628	+/-3.07	5.55	10.0	pCi/L					
Chromium-51	U	16.8	+/-35.2	63.7		pCi/L					
Cobalt-56	U	1.94	+/-3.36	6.53		pCi/L					
Cobalt-57	U	0.753	+/-2.17	3.99		pCi/L					
Cobalt-58	U	-2.44	+/-3.62	5.39		pCi/L					
Cobalt-60	U	-0.399	+/-3.25	6.12		pCi/L					
Europium-152	U	-5.11	+/-10.4	15.2		pCi/L					
Europium-154	U	6.77	+/-8.21	17.2		pCi/L					
Europium-155	U	1.45	+/-10.1	16.3		pCi/L					
Iridium-192	U	0.609	+/-3.31	5.90		pCi/L					
Iron-59	U	-3.72	+/-6.74	11.4		pCi/L					
Lead-210	U	-87.6	+/-275	420		pCi/L					
Lead-212	U	5.06	+/-10.4	8.59		pCi/L					
Lead-214	U	5.72	+/-11.8	14.5		pCi/L					
Manganese-54	U	-2.74	+/-3.03	4.97		pCi/L					
Mercury-203	U	1.85	+/-3.26	5.99		pCi/L					
Neodymium-147	U	-37.6	+/-43.9	75.2		pCi/L					
Neptunium-239	U	9.04	+/-23.4	43.0		pCi/L					
Niobium-94	U	-1.86	+/-2.76	4.72		pCi/L					
Niobium-95	U	-2.21	+/-3.46	5.91		pCi/L					
Potassium-40	U	28.1	+/-45.0	49.5		pCi/L					
Promethium-144	U	1.54	+/-2.96	5.11		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 32	Project:	WNUC00124
Sample ID:	341588020	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.771	+/-3.63	6.26	pCi/L
Radium-228	U	9.04	+/-14.7	22.8	pCi/L
Ruthenium-106	U	-5.24	+/-25.8	46.7	pCi/L
Silver-110m	U	-0.50	+/-2.77	5.03	pCi/L
Sodium-22	U	2.12	+/-2.96	6.09	pCi/L
Thallium-208	U	-2.36	+/-4.21	6.02	pCi/L
Thorium-230	U	-818	+/-1060	1550	pCi/L
Thorium-234	U	-98.6	+/-128	216	pCi/L
Tin-113	U	-0.572	+/-3.85	6.69	pCi/L
Uranium-235	U	-6.92	+/-20.0	30.8	pCi/L
Uranium-238	U	-98.6	+/-128	216	pCi/L
Yttrium-88	U	-1.89	+/-3.63	6.34	pCi/L
Zinc-65	U	2.33	+/-6.48	12.4	pCi/L
Zirconium-95	U	-2.23	+/-5.86	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.751	+/-2.51	4.97	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		250	+/-7.78	3.94	5.00	pCi/L					
Alpha		9.78	+/-5.13	4.98	5.00	pCi/L	JAOC	02/04/14	1648	1362036	3
Beta		223	+/-7.17	2.09	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	381	+/-130	198	300	pCi/L	MYM1	01/31/14	1133	1361891	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

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Client Sample ID: WELL 32  
Sample ID: 341588020

Project: WNUC00124  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 341588021  
Matrix: Ground Water  
Collect Date: 15-JAN-14 11:19  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.69	+/-16.1	28.5		pCi/L		RXF2	01/24/14	1449 1361919	1
Americium-241	U	-12.7	+/-21.4	37.6		pCi/L					
Antimony-124	U	-0.823	+/-7.13	13.9		pCi/L					
Antimony-125	U	3.25	+/-8.56	16.0		pCi/L					
Barium-133	U	0.929	+/-4.08	6.74		pCi/L					
Barium-140	U	0.253	+/-6.51	12.6		pCi/L					
Beryllium-7	U	2.71	+/-27.4	50.0		pCi/L					
Bismuth-212	U	-9.25	+/-53.8	83.4		pCi/L					
Bismuth-214		20.8	+/-12.4	11.6		pCi/L					
Cerium-139	U	-2.0	+/-3.11	4.55		pCi/L					
Cerium-141	U	-1.91	+/-5.75	8.73		pCi/L					
Cerium-144	U	0.631	+/-19.4	34.0		pCi/L					
Cesium-134	U	1.16	+/-3.40	6.62		pCi/L					
Cesium-136	U	2.01	+/-7.51	14.2		pCi/L					
Cesium-137	U	2.65	+/-4.36	5.62	10.0	pCi/L					
Chromium-51	U	-16	+/-32.6	49.9		pCi/L					
Cobalt-56	U	0.950	+/-3.58	6.11		pCi/L					
Cobalt-57	U	-0.078	+/-2.46	4.33		pCi/L					
Cobalt-58	U	-4.02	+/-2.87	4.41		pCi/L					
Cobalt-60	U	2.72	+/-3.47	7.39		pCi/L					
Europium-152	U	-6.23	+/-9.44	15.0		pCi/L					
Europium-154	U	-10.1	+/-8.52	12.3		pCi/L					
Europium-155	U	1.05	+/-10.6	18.8		pCi/L					
Iridium-192	U	5.01	+/-6.52	5.41		pCi/L					
Iron-59	U	1.89	+/-7.09	13.6		pCi/L					
Lead-210	U	695	+/-1100	1220		pCi/L					
Lead-212	U	-0.813	+/-7.62	12.3		pCi/L					
Lead-214	UI	0.00	+/-13.9	18.3		pCi/L					
Manganese-54	U	3.74	+/-3.50	7.11		pCi/L					
Mercury-203	U	-1.09	+/-3.25	5.82		pCi/L					
Neodymium-147	U	-18.1	+/-32.9	56.0		pCi/L					
Neptunium-239	U	-26.7	+/-25.8	42.7		pCi/L					
Niobium-94	U	3.02	+/-4.69	6.52		pCi/L					
Niobium-95	U	1.33	+/-3.75	5.70		pCi/L					
Potassium-40	U	-43.3	+/-53.4	78.0		pCi/L					
Promethium-144	U	0.0463	+/-3.90	6.31		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 33  
Sample ID: 341588021

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.355	+/-4.12	7.37	pCi/L
Radium-228	U	-5.69	+/-16.1	28.5	pCi/L
Ruthenium-106	U	6.58	+/-27.8	51.2	pCi/L
Silver-110m	U	-1.6	+/-3.32	4.76	pCi/L
Sodium-22	U	-3.67	+/-2.98	4.23	pCi/L
Thallium-208	U	2.94	+/-5.31	5.56	pCi/L
Thorium-230	U	186	+/-1400	2290	pCi/L
Thorium-234	U	-71.6	+/-227	388	pCi/L
Tin-113	U	1.29	+/-4.19	6.97	pCi/L
Uranium-235	U	11.0	+/-27.9	30.6	pCi/L
Uranium-238	U	-71.6	+/-227	388	pCi/L
Yttrium-88	U	-2.01	+/-4.22	7.46	pCi/L
Zinc-65	U	-0.129	+/-8.76	13.9	pCi/L
Zirconium-95	U	1.06	+/-6.36	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.853	+/-2.18	4.99	5.00	pCi/L	JAOC	02/02/14	1744	1362036	2
Beta		10.1	+/-3.03	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	18.1	+/-115	201	300	pCi/L	MYM1	01/31/14	1149	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 38	Project:	WNUC00124
Sample ID:	341588022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JAN-14 09:44		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-18.2	+/-15.1	24.8		pCi/L		RXF2	01/27/14	0812 1361919	1
Americium-241	U	-1.33	+/-21.5	37.2		pCi/L					
Antimony-124	U	0.368	+/-8.12	16.0		pCi/L					
Antimony-125	U	0.0251	+/-8.84	16.2		pCi/L					
Barium-133	U	0.128	+/-5.02	7.66		pCi/L					
Barium-140	U	-1.13	+/-7.26	13.8		pCi/L					
Beryllium-7	U	-9.84	+/-30.4	54.2		pCi/L					
Bismuth-212	U	-31.9	+/-53.2	83.2		pCi/L					
Bismuth-214	UI	0.00	+/-15.4	12.5		pCi/L					
Cerium-139	U	0.381	+/-3.15	5.64		pCi/L					
Cerium-141	U	8.22	+/-6.26	11.6		pCi/L					
Cerium-144	U	-29.2	+/-22.7	32.8		pCi/L					
Cesium-134	U	-0.379	+/-3.64	6.50		pCi/L					
Cesium-136	U	4.34	+/-8.32	16.4		pCi/L					
Cesium-137		6.78	+/-5.88	5.52	10.0	pCi/L					
Chromium-51	U	28.6	+/-49.9	62.0		pCi/L					
Cobalt-56	U	-1.86	+/-3.63	6.15		pCi/L					
Cobalt-57	U	-0.18	+/-2.78	4.68		pCi/L					
Cobalt-58	U	-2.14	+/-3.14	5.24		pCi/L					
Cobalt-60	U	-0.23	+/-3.39	6.30		pCi/L					
Europium-152	U	1.60	+/-9.59	17.0		pCi/L					
Europium-154	U	-1.61	+/-8.83	16.3		pCi/L					
Europium-155	U	11.8	+/-10.8	19.5		pCi/L					
Iridium-192	U	-2.67	+/-4.14	5.96		pCi/L					
Iron-59	U	-1.65	+/-7.18	13.1		pCi/L					
Lead-210	U	-644	+/-796	1200		pCi/L					
Lead-212	U	0.418	+/-10.0	12.4		pCi/L					
Lead-214	U	9.90	+/-13.2	14.2		pCi/L					
Manganese-54	U	1.40	+/-3.21	6.04		pCi/L					
Mercury-203	U	-1.0	+/-3.84	6.63		pCi/L					
Neodymium-147	U	23.3	+/-43.6	83.6		pCi/L					
Neptunium-239	U	-1.44	+/-28.3	47.8		pCi/L					
Niobium-94	U	1.44	+/-3.27	5.96		pCi/L					
Niobium-95	U	0.997	+/-3.56	6.59		pCi/L					
Potassium-40		83.8	+/-43.7	48.1		pCi/L					
Promethium-144	U	-1.78	+/-5.22	5.98		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 38  
Sample ID: 341588022

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.949	+/-3.88	7.00	pCi/L
Radium-228	U	-18.2	+/-15.1	24.8	pCi/L
Ruthenium-106	U	-0.138	+/-26.8	49.0	pCi/L
Silver-110m	U	-2.76	+/-3.50	4.87	pCi/L
Sodium-22	U	0.312	+/-3.00	5.79	pCi/L
Thallium-208	U	-3.71	+/-4.69	6.26	pCi/L
Thorium-230	U	-1300	+/-1390	2290	pCi/L
Thorium-234	U	-78.2	+/-214	337	pCi/L
Tin-113	U	2.44	+/-4.86	7.80	pCi/L
Uranium-235	U	-12.9	+/-25.0	37.1	pCi/L
Uranium-238	U	-78.2	+/-214	337	pCi/L
Yttrium-88	U	-1.8	+/-3.97	7.15	pCi/L
Zinc-65	U	4.04	+/-8.91	14.0	pCi/L
Zirconium-95	U	-2.54	+/-6.23	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.708	+/-2.29	4.87	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta	U	2.48	+/-1.69	2.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-19.5	+/-111	197	300	pCi/L	MYM1	01/31/14	1206	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	341588023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 10:34		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-20.9	+/-17.5	25.1		pCi/L		RXF2	01/24/14	1449 1361919	1
Americium-241	U	8.34	+/-28.2	51.3		pCi/L					
Antimony-124	U	2.87	+/-9.00	18.7		pCi/L					
Antimony-125	U	16.0	+/-12.4	18.7		pCi/L					
Barium-133	U	2.29	+/-4.87	8.16		pCi/L					
Barium-140	U	6.00	+/-6.59	14.8		pCi/L					
Beryllium-7	U	-1.19	+/-31.1	55.9		pCi/L					
Bismuth-212	U	-4.09	+/-45.7	85.7		pCi/L					
Bismuth-214		22.5	+/-13.8	13.6		pCi/L					
Cerium-139	U	-5.04	+/-3.10	4.75		pCi/L					
Cerium-141	U	-3.68	+/-6.03	10.0		pCi/L					
Cerium-144	U	-2.2	+/-20.9	36.2		pCi/L					
Cesium-134	U	3.55	+/-3.01	6.40		pCi/L					
Cesium-136	U	-1.84	+/-7.77	14.1		pCi/L					
Cesium-137	U	5.99	+/-3.84	7.70	10.0	pCi/L					
Chromium-51	U	20.0	+/-33.5	63.5		pCi/L					
Cobalt-56	U	-0.329	+/-3.67	6.81		pCi/L					
Cobalt-57	U	-0.112	+/-2.79	4.85		pCi/L					
Cobalt-58	U	-1.04	+/-3.76	6.15		pCi/L					
Cobalt-60	U	1.39	+/-3.77	7.53		pCi/L					
Europium-152	U	8.26	+/-11.0	20.8		pCi/L					
Europium-154	U	6.55	+/-12.9	22.1		pCi/L					
Europium-155	U	5.00	+/-11.2	20.2		pCi/L					
Iridium-192	U	-1.43	+/-3.53	6.22		pCi/L					
Iron-59	U	-0.548	+/-6.98	13.1		pCi/L					
Lead-210	U	-1020	+/-1310	2000		pCi/L					
Lead-212	U	0.706	+/-12.1	12.4		pCi/L					
Lead-214	UI	0.00	+/-14.0	21.3		pCi/L					
Manganese-54	U	-0.168	+/-3.68	6.83		pCi/L					
Mercury-203	U	1.57	+/-3.66	6.84		pCi/L					
Neodymium-147	U	-6.12	+/-40.1	71.0		pCi/L					
Neptunium-239	U	-9.8	+/-29.8	51.1		pCi/L					
Niobium-94	U	2.03	+/-3.28	6.52		pCi/L					
Niobium-95	U	-1.66	+/-3.96	7.09		pCi/L					
Potassium-40	U	7.66	+/-47.7	90.7		pCi/L					
Promethium-144	U	-2.37	+/-3.33	5.82		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 39	Project:	WNUC00124
Sample ID:	341588023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.81	+/-4.27	8.19	pCi/L
Radium-228	U	-20.9	+/-17.5	25.1	pCi/L
Ruthenium-106	U	29.2	+/-29.3	58.8	pCi/L
Silver-110m	U	2.43	+/-3.07	5.89	pCi/L
Sodium-22	U	2.31	+/-4.55	7.41	pCi/L
Thallium-208	U	-1.59	+/-5.02	7.35	pCi/L
Thorium-230	U	-1260	+/-1850	2850	pCi/L
Thorium-234	U	-301	+/-266	403	pCi/L
Tin-113	U	3.07	+/-4.69	8.89	pCi/L
Uranium-235	U	0.563	+/-24.9	39.1	pCi/L
Uranium-238	U	-301	+/-266	403	pCi/L
Yttrium-88	U	-0.528	+/-4.61	8.81	pCi/L
Zinc-65	U	9.30	+/-6.74	16.4	pCi/L
Zirconium-95	U	4.68	+/-5.99	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.353	+/-2.45	4.93	5.00	pCi/L	JAOC	02/02/14	1745	1362036	2
Beta		15.3	+/-2.47	2.36	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.6	+/-112	197	300	pCi/L	MYM1	01/31/14	1223	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 41R	Project:	WNUC00124
Sample ID:	341588024	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 10:02		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.77	+/-15.1	23.9		pCi/L		RXF2	01/24/14	1453 1361919	1
Americium-241	U	1.63	+/-14.5	22.4		pCi/L					
Antimony-124	U	3.06	+/-7.99	16.3		pCi/L					
Antimony-125	U	5.01	+/-9.88	16.0		pCi/L					
Barium-133	U	4.13	+/-3.64	6.77		pCi/L					
Barium-140	U	-2.84	+/-5.58	9.90		pCi/L					
Beryllium-7	U	-9.27	+/-29.0	49.3		pCi/L					
Bismuth-212	U	-35.6	+/-58.2	75.6		pCi/L					
Bismuth-214	UI	0.00	+/-11.1	16.6		pCi/L					
Cerium-139	U	0.760	+/-2.76	4.99		pCi/L					
Cerium-141	U	2.36	+/-5.90	9.59		pCi/L					
Cerium-144	U	-9.27	+/-18.2	31.9		pCi/L					
Cesium-134	U	-0.0819	+/-3.70	6.72		pCi/L					
Cesium-136	U	-0.152	+/-6.93	12.7		pCi/L					
Cesium-137		24.8	+/-6.46	5.56	10.0	pCi/L					
Chromium-51	U	0.0675	+/-31.5	55.5		pCi/L					
Cobalt-56	U	-1.61	+/-3.57	6.19		pCi/L					
Cobalt-57	U	-0.273	+/-2.26	4.06		pCi/L					
Cobalt-58	U	-1.63	+/-3.46	6.00		pCi/L					
Cobalt-60	U	1.69	+/-4.00	7.36		pCi/L					
Europium-152	U	-0.93	+/-10.4	15.9		pCi/L					
Europium-154	U	-4.57	+/-9.32	16.7		pCi/L					
Europium-155	U	3.72	+/-9.66	16.7		pCi/L					
Iridium-192	U	-0.60	+/-3.27	5.69		pCi/L					
Iron-59	U	-3.15	+/-6.95	11.9		pCi/L					
Lead-210	U	-90.3	+/-325	498		pCi/L					
Lead-212	U	0.678	+/-7.35	11.0		pCi/L					
Lead-214	U	8.48	+/-9.64	15.7		pCi/L					
Manganese-54	U	1.94	+/-3.49	6.64		pCi/L					
Mercury-203	U	-0.431	+/-3.39	5.93		pCi/L					
Neodymium-147	U	-19.6	+/-39.6	70.1		pCi/L					
Neptunium-239	U	-2.71	+/-25.0	45.0		pCi/L					
Niobium-94	U	1.01	+/-3.09	5.79		pCi/L					
Niobium-95	U	1.10	+/-3.77	6.01		pCi/L					
Potassium-40	U	41.6	+/-62.7	42.9		pCi/L					
Promethium-144	U	-0.498	+/-3.17	5.70		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 41R  
Sample ID: 341588024

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.64	+/-3.98	6.56	pCi/L
Radium-228	U	-2.77	+/-15.1	23.9	pCi/L
Ruthenium-106	U	43.6	+/-43.1	45.9	pCi/L
Silver-110m	U	2.00	+/-3.13	5.48	pCi/L
Sodium-22	U	-1.51	+/-3.30	5.93	pCi/L
Thallium-208	U	-1.03	+/-4.14	6.68	pCi/L
Thorium-230	U	147	+/-1100	1690	pCi/L
Thorium-234	U	52.0	+/-179	204	pCi/L
Tin-113	U	3.98	+/-3.90	7.42	pCi/L
Uranium-235	U	26.8	+/-30.2	33.1	pCi/L
Uranium-238	U	52.0	+/-179	204	pCi/L
Yttrium-88	U	-1.13	+/-3.71	6.76	pCi/L
Zinc-65	U	-0.287	+/-7.53	13.3	pCi/L
Zirconium-95	U	3.38	+/-5.12	10.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.693	+/-2.61	4.83	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		17.6	+/-3.04	3.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	47.6	+/-120	207	300	pCi/L	MYM1	01/31/14	1239	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 43  
Sample ID: 341588025  
Matrix: Ground Water  
Collect Date: 15-JAN-14 10:55  
Receive Date: 17-JAN-14  
Collector: Client

Project: WNUC00124  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.12	+/-20.0	34.7		pCi/L		RXF2	01/27/14	0726 1361919	1
Americium-241	U	9.08	+/-24.2	39.4		pCi/L					
Antimony-124	U	-4.07	+/-10.8	19.9		pCi/L					
Antimony-125	U	1.46	+/-11.5	20.2		pCi/L					
Barium-133	U	2.22	+/-5.75	9.22		pCi/L					
Barium-140	U	3.36	+/-9.11	18.7		pCi/L					
Beryllium-7	U	-9.59	+/-36.7	66.3		pCi/L					
Bismuth-212	U	0.446	+/-78.9	109		pCi/L					
Bismuth-214	U	9.99	+/-17.9	15.1		pCi/L					
Cerium-139	U	-0.368	+/-3.77	6.78		pCi/L					
Cerium-141	U	4.72	+/-7.64	13.3		pCi/L					
Cerium-144	U	-26.7	+/-25.9	41.5		pCi/L					
Cesium-134	U	0.950	+/-3.96	7.49		pCi/L					
Cesium-136	U	4.90	+/-10.1	19.9		pCi/L					
Cesium-137		7.87	+/-6.05	7.65	10.0	pCi/L					
Chromium-51	U	1.94	+/-45.5	80.3		pCi/L					
Cobalt-56	U	-0.896	+/-4.70	8.28		pCi/L					
Cobalt-57	U	-1.51	+/-3.30	5.50		pCi/L					
Cobalt-58	U	2.65	+/-4.15	8.10		pCi/L					
Cobalt-60	UI	0.00	+/-9.71	8.54		pCi/L					
Europium-152	U	1.79	+/-12.8	22.7		pCi/L					
Europium-154	U	2.04	+/-11.3	22.1		pCi/L					
Europium-155	U	-14.5	+/-12.9	20.8		pCi/L					
Iridium-192	U	-0.306	+/-4.61	8.08		pCi/L					
Iron-59	U	-0.148	+/-8.29	15.7		pCi/L					
Lead-210	U	68.8	+/-784	1180		pCi/L					
Lead-212	U	1.64	+/-9.91	14.9		pCi/L					
Lead-214	U	9.21	+/-17.4	20.8		pCi/L					
Manganese-54	U	-2.01	+/-4.00	6.83		pCi/L					
Mercury-203	U	-2.62	+/-5.27	7.75		pCi/L					
Neodymium-147	U	-48.4	+/-58.2	99.4		pCi/L					
Neptunium-239	U	-24.8	+/-34.7	57.1		pCi/L					
Niobium-94	U	0.0892	+/-4.46	8.01		pCi/L					
Niobium-95	U	1.85	+/-4.54	8.54		pCi/L					
Potassium-40	UI	0.00	+/-91.0	71.7		pCi/L					
Promethium-144	U	-2.72	+/-4.36	7.40		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 43  
Sample ID: 341588025

Project: WNUC00124  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.05	+/-5.69	9.07	pCi/L
Radium-228	U	-3.12	+/-20.0	34.7	pCi/L
Ruthenium-106	U	3.96	+/-36.0	66.5	pCi/L
Silver-110m	U	-0.14	+/-4.40	6.93	pCi/L
Sodium-22	U	0.649	+/-3.97	7.76	pCi/L
Thallium-208	U	0.567	+/-6.33	6.95	pCi/L
Thorium-230	U	-516	+/-1720	2620	pCi/L
Thorium-234	U	89.0	+/-232	350	pCi/L
Tin-113	U	-2.49	+/-5.92	10.0	pCi/L
Uranium-235	U	-10	+/-27.3	45.2	pCi/L
Uranium-238	U	89.0	+/-232	350	pCi/L
Yttrium-88	U	2.32	+/-3.81	8.71	pCi/L
Zinc-65	U	-6.43	+/-9.59	16.5	pCi/L
Zirconium-95	U	-2.69	+/-7.77	13.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.229	+/-2.28	4.95	5.00	pCi/L	JAOC	02/04/14	1322	1362036	2
Beta	U	2.11	+/-2.32	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.3	+/-115	203	300	pCi/L	MYM1	01/31/14	1256	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	341588026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JAN-14 11:45		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.36	+/-24.1	33.4		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	5.35	+/-12.1	19.6		pCi/L					
Antimony-124	U	2.57	+/-8.70	17.7		pCi/L					
Antimony-125	U	3.78	+/-10.2	19.0		pCi/L					
Barium-133	U	-3.47	+/-7.08	8.24		pCi/L					
Barium-140	U	-4.62	+/-9.36	16.4		pCi/L					
Beryllium-7	U	-18.5	+/-34.1	59.2		pCi/L					
Bismuth-212	U	21.3	+/-62.0	97.7		pCi/L					
Bismuth-214		25.7	+/-14.8	13.8		pCi/L					
Cerium-139	U	-0.577	+/-2.94	5.23		pCi/L					
Cerium-141	U	-1.97	+/-7.82	11.2		pCi/L					
Cerium-144	U	0.352	+/-21.2	35.7		pCi/L					
Cesium-134	U	2.10	+/-4.25	8.22		pCi/L					
Cesium-136	U	5.50	+/-9.48	18.4		pCi/L					
Cesium-137		7.64	+/-5.41	6.69	10.0	pCi/L					
Chromium-51	U	-34.2	+/-36.7	59.8		pCi/L					
Cobalt-56	U	0.132	+/-4.19	7.75		pCi/L					
Cobalt-57	U	0.947	+/-2.70	4.65		pCi/L					
Cobalt-58	U	0.439	+/-3.84	7.22		pCi/L					
Cobalt-60	U	1.67	+/-4.27	7.54		pCi/L					
Europium-152	U	7.21	+/-13.4	18.9		pCi/L					
Europium-154	U	-5.7	+/-10.9	19.6		pCi/L					
Europium-155	U	-0.599	+/-10.8	18.4		pCi/L					
Iridium-192	U	0.141	+/-3.54	6.21		pCi/L					
Iron-59	UI	0.00	+/-8.55	14.9		pCi/L					
Lead-210	U	7.84	+/-268	430		pCi/L					
Lead-212	U	-0.442	+/-8.51	13.0		pCi/L					
Lead-214	U	0.554	+/-8.88	16.3		pCi/L					
Manganese-54	U	-6.05	+/-3.51	5.31		pCi/L					
Mercury-203	U	-0.466	+/-3.80	6.61		pCi/L					
Neodymium-147	U	-20.2	+/-47.5	83.0		pCi/L					
Neptunium-239	U	16.3	+/-28.8	50.2		pCi/L					
Niobium-94	U	-0.809	+/-3.63	6.32		pCi/L					
Niobium-95	U	1.54	+/-3.65	7.10		pCi/L					
Potassium-40	U	21.2	+/-55.2	102		pCi/L					
Promethium-144	U	0.729	+/-4.04	7.25		pCi/L					

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 44	Project:	WNUC00124
Sample ID:	341588026	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.066	+/-4.41	8.02	pCi/L
Radium-228	U	4.36	+/-24.1	33.4	pCi/L
Ruthenium-106	U	-4.9	+/-33.8	59.9	pCi/L
Silver-110m	U	-1.51	+/-3.87	5.67	pCi/L
Sodium-22	U	-2.07	+/-3.85	6.86	pCi/L
Thallium-208	U	4.35	+/-6.07	6.58	pCi/L
Thorium-230	U	152	+/-1060	1560	pCi/L
Thorium-234	U	21.7	+/-176	176	pCi/L
Tin-113	U	2.47	+/-4.85	9.12	pCi/L
Uranium-235	U	17.6	+/-21.9	38.2	pCi/L
Uranium-238	U	21.7	+/-176	176	pCi/L
Yttrium-88	U	-1.64	+/-3.72	6.63	pCi/L
Zinc-65	U	-4.65	+/-9.93	14.3	pCi/L
Zirconium-95	U	-0.93	+/-7.58	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-2.39	+/-1.89	4.96	5.00	pCi/L	JAOC	02/05/14	1537	1362036	2
Beta		4.75	+/-2.42	3.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	21.6	+/-113	196	300	pCi/L	MYM1	01/31/14	1312	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	341588027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 12:12		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.8	+/-21.8	22.2		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	5.01	+/-12.7	19.6		pCi/L					
Antimony-124	U	-1.41	+/-8.84	16.3		pCi/L					
Antimony-125	U	-9.96	+/-8.97	14.1		pCi/L					
Barium-133	U	1.22	+/-4.41	6.90		pCi/L					
Barium-140	U	-8.11	+/-7.07	10.8		pCi/L					
Beryllium-7	U	2.90	+/-27.6	51.0		pCi/L					
Bismuth-212	U	45.2	+/-47.7	92.9		pCi/L					
Bismuth-214		13.1	+/-12.4	12.1		pCi/L					
Cerium-139	U	-1.69	+/-2.76	4.74		pCi/L					
Cerium-141	U	3.17	+/-6.10	11.0		pCi/L					
Cerium-144	U	10.9	+/-22.1	36.0		pCi/L					
Cesium-134	U	1.81	+/-3.90	6.55		pCi/L					
Cesium-136	U	4.25	+/-8.09	16.1		pCi/L					
Cesium-137	UI	0.00	+/-6.33	6.09	10.0	pCi/L					
Chromium-51	U	-10.3	+/-36.0	61.4		pCi/L					
Cobalt-56	U	-1.73	+/-3.79	6.51		pCi/L					
Cobalt-57	U	1.26	+/-2.51	4.56		pCi/L					
Cobalt-58	U	0.436	+/-3.45	6.34		pCi/L					
Cobalt-60	UI	0.00	+/-6.43	6.46		pCi/L					
Europium-152	U	-9.06	+/-10.1	16.5		pCi/L					
Europium-154	U	3.28	+/-9.22	18.2		pCi/L					
Europium-155	U	5.46	+/-9.64	17.7		pCi/L					
Iridium-192	U	1.59	+/-3.44	6.17		pCi/L					
Iron-59	U	3.21	+/-5.78	10.9		pCi/L					
Lead-210	U	28.5	+/-273	315		pCi/L					
Lead-212	U	3.90	+/-10.6	9.74		pCi/L					
Lead-214	U	10.5	+/-12.3	12.7		pCi/L					
Manganese-54	U	0.235	+/-3.54	6.38		pCi/L					
Mercury-203	U	3.50	+/-3.89	6.69		pCi/L					
Neodymium-147	U	12.7	+/-47.6	88.8		pCi/L					
Neptunium-239	U	-15.2	+/-25.0	43.4		pCi/L					
Niobium-94	U	-1.58	+/-2.93	5.05		pCi/L					
Niobium-95	U	1.24	+/-3.58	6.67		pCi/L					
Potassium-40	U	-23.9	+/-47.0	85.8		pCi/L					
Promethium-144	U	1.78	+/-3.38	6.33		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental - PO 4500467846

Client Sample ID:	WELL 47	Project:	WNUC00124
Sample ID:	341588027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.859	+/-3.97	7.37	pCi/L
Radium-228	U	11.8	+/-21.8	22.2	pCi/L
Ruthenium-106	U	-14.2	+/-31.3	54.6	pCi/L
Silver-110m	U	-1.13	+/-3.88	5.88	pCi/L
Sodium-22	U	1.67	+/-3.19	6.45	pCi/L
Thallium-208	U	-1.88	+/-4.08	6.60	pCi/L
Thorium-230	U	240	+/-949	1450	pCi/L
Thorium-234	U	69.1	+/-147	178	pCi/L
Tin-113	U	-0.865	+/-4.22	7.21	pCi/L
Uranium-235	U	-20.9	+/-20.0	33.8	pCi/L
Uranium-238	U	69.1	+/-147	178	pCi/L
Yttrium-88	U	1.02	+/-3.15	6.53	pCi/L
Zinc-65	U	2.47	+/-6.69	11.8	pCi/L
Zirconium-95	U	2.11	+/-6.27	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.86	+/-3.00	4.93	5.00	pCi/L	JAOC	02/02/14	1745	1362036	2
Beta		2.92	+/-1.93	2.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	67.3	+/-111	189	300	pCi/L	MYM1	01/31/14	1329	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			103	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID:	WELL 48	Project:	WNUC00124
Sample ID:	341588028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JAN-14 11:00		
Receive Date:	17-JAN-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.57	+/-17.3	27.9		pCi/L		RXF2	01/27/14	0727 1361919	1
Americium-241	U	-7.28	+/-31.4	54.1		pCi/L					
Antimony-124	U	-2.89	+/-7.23	13.1		pCi/L					
Antimony-125	U	-1.47	+/-9.00	15.9		pCi/L					
Barium-133	U	-1.07	+/-4.90	7.52		pCi/L					
Barium-140	U	0.816	+/-9.11	17.8		pCi/L					
Beryllium-7	U	15.6	+/-33.8	62.4		pCi/L					
Bismuth-212	U	-29.3	+/-47.9	83.9		pCi/L					
Bismuth-214	U	12.1	+/-12.7	13.3		pCi/L					
Cerium-139	U	-0.322	+/-3.44	5.76		pCi/L					
Cerium-141	U	-1.11	+/-7.08	11.9		pCi/L					
Cerium-144	U	8.60	+/-22.0	38.4		pCi/L					
Cesium-134	U	1.56	+/-3.92	7.56		pCi/L					
Cesium-136	U	0.882	+/-8.77	16.6		pCi/L					
Cesium-137	U	7.05	+/-4.29	8.81	10.0	pCi/L					
Chromium-51	U	-63.4	+/-42.7	59.9		pCi/L					
Cobalt-56	U	-0.0723	+/-3.75	6.96		pCi/L					
Cobalt-57	U	0.884	+/-2.92	5.07		pCi/L					
Cobalt-58	U	-0.145	+/-3.79	7.01		pCi/L					
Cobalt-60	U	6.84	+/-4.68	9.92		pCi/L					
Europium-152	U	-3.04	+/-11.9	18.1		pCi/L					
Europium-154	U	-7.77	+/-10.1	16.5		pCi/L					
Europium-155	U	6.01	+/-12.0	21.3		pCi/L					
Iridium-192	U	4.49	+/-3.88	7.41		pCi/L					
Iron-59	U	5.18	+/-7.58	15.4		pCi/L					
Lead-210	U	-713	+/-1510	2300		pCi/L					
Lead-212	U	4.48	+/-12.1	13.5		pCi/L					
Lead-214	U	13.3	+/-13.8	15.5		pCi/L					
Manganese-54	U	1.37	+/-3.15	6.17		pCi/L					
Mercury-203	U	1.78	+/-4.02	7.40		pCi/L					
Neodymium-147	U	-23.8	+/-53.7	91.3		pCi/L					
Neptunium-239	U	-4.82	+/-33.5	53.9		pCi/L					
Niobium-94	U	1.62	+/-3.39	6.52		pCi/L					
Niobium-95	U	3.41	+/-3.84	7.70		pCi/L					
Potassium-40	U	37.0	+/-59.0	68.5		pCi/L					
Promethium-144	U	-0.493	+/-3.44	6.29		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 12, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental - PO 4500467846

Client Sample ID: WELL 48

Sample ID: 341588028

Project: WNUC00124

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.379	+/-4.27	7.55	pCi/L
Radium-228	U	-8.57	+/-17.3	27.9	pCi/L
Ruthenium-106	U	10.8	+/-31.2	57.3	pCi/L
Silver-110m	U	-1.17	+/-3.57	6.45	pCi/L
Sodium-22	U	-3.21	+/-3.59	5.73	pCi/L
Thallium-208	U	2.33	+/-5.08	5.70	pCi/L
Thorium-230	U	490	+/-1850	2670	pCi/L
Thorium-234	U	109	+/-297	455	pCi/L
Tin-113	U	3.99	+/-3.98	7.78	pCi/L
Uranium-235	U	13.8	+/-27.3	41.8	pCi/L
Uranium-238	U	109	+/-297	455	pCi/L
Yttrium-88	U	-3.27	+/-3.95	6.54	pCi/L
Zinc-65	U	6.61	+/-9.17	13.3	pCi/L
Zirconium-95	U	0.00	+/-6.67	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.766	+/-2.16	4.87	5.00	pCi/L	JAOC	02/02/14	1749	1362036	2
Beta		9.86	+/-2.97	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.2	+/-110	189	300	pCi/L	MYM1	01/31/14	1346	1361891	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			103	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## QC Summary

Report Date: February 12, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 341588

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1364996										
QC1203031632	341588019	DUP									
Uranium-233/234		12.0		11.8	pCi/L	2.04		(0%-20%)	MXS2	02/08/14	12:57
	Uncertainty	+/-1.99		+/-1.93							
Uranium-235/236		0.631		0.575	pCi/L	9.27		(0% - 100%)			
	Uncertainty	+/-0.547		+/-0.522							
Uranium-238		2.19		4.18	pCi/L	62.3*		(0%-20%)			
	Uncertainty	+/-0.887		+/-1.15							
QC1203031633	LCS										
Uranium-233/234				26.1	pCi/L					02/08/14	12:57
	Uncertainty			+/-2.86							
Uranium-235/236				1.69	pCi/L						
	Uncertainty			+/-0.830							
Uranium-238		27.0		26.7	pCi/L		98.7	(75%-125%)			
	Uncertainty			+/-2.88							
QC1203031631	MB										
Uranium-233/234			U	0.0256	pCi/L					02/08/14	12:57
	Uncertainty			+/-0.292							
Uranium-235/236			U	0.151	pCi/L						
	Uncertainty			+/-0.346							
Uranium-238			U	0.0609	pCi/L						
	Uncertainty			+/-0.228							
Rad Gamma Spec											
Batch	1361916										
QC1203023711	341588001	DUP									
Actinium-228		U	1.99	U	-16.3	pCi/L	N/A		N/A	RXF2	02/04/14 08:56
	Uncertainty		+/-20.7		+/-16.7						
Americium-241		U	14.0	U	10.3	pCi/L	N/A		N/A		
	Uncertainty		+/-28.2		+/-21.4						
Antimony-124		U	-4.73	U	7.32	pCi/L	N/A		N/A		
	Uncertainty		+/-10.5		+/-10.1						
Antimony-125		U	4.62	U	1.19	pCi/L	N/A		N/A		
	Uncertainty		+/-8.72		+/-10.3						
Barium-133		U	-0.452	U	0.706	pCi/L	N/A		N/A		
	Uncertainty		+/-5.18		+/-4.63						
Barium-140		U	1.70	U	1.93	pCi/L	N/A		N/A		
	Uncertainty		+/-10.2		+/-14.7						
Beryllium-7		U	-4.76	U	-17.4	pCi/L	N/A		N/A		
	Uncertainty		+/-38.0		+/-37.2						
Bismuth-212		U	20.9	U	-33.5	pCi/L	N/A		N/A		
	Uncertainty		+/-45.4		+/-61.3						
Bismuth-214		U	11.1	U	8.44	pCi/L	N/A		N/A		

# GEL LABORATORIES LLC

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
	Uncertainty										
		+/-9.86		+/-10.9							
Cerium-139	U	1.52	U	1.60	pCi/L	N/A		N/A	RXF2	02/04/14	08:56
	Uncertainty	+/-3.13		+/-3.67							
Cerium-141	U	-2.13	U	0.772	pCi/L	N/A		N/A			
	Uncertainty	+/-7.77		+/-8.62							
Cerium-144	U	8.10	U	2.11	pCi/L	N/A		N/A			
	Uncertainty	+/-20.0		+/-24.3							
Cesium-134	U	-0.838	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-3.81		+/-4.12							
Cesium-136	U	21.3	U	5.58	pCi/L	N/A		N/A			
	Uncertainty	+/-8.77		+/-15.3							
Cesium-137	U	1.56	U	1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.37		+/-3.82							
Chromium-51	U	31.7	U	-35.5	pCi/L	N/A		N/A			
	Uncertainty	+/-43.1		+/-51.2							
Cobalt-56	U	-2.13	U	-2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.15		+/-4.77							
Cobalt-57	U	-2.27	U	2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-2.66		+/-3.21							
Cobalt-58	U	-2.85	U	-1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-3.71		+/-4.99							
Cobalt-60	U	0.607	U	-4.76	pCi/L	N/A		N/A			
	Uncertainty	+/-4.48		+/-5.40							
Europium-152	U	-6.9	U	5.21	pCi/L	N/A		N/A			
	Uncertainty	+/-9.57		+/-16.6							
Europium-154	U	-5.22	U	-3.51	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-9.43							
Europium-155	U	-5.3	U	-1.46	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-12.3							
Iridium-192	U	5.33	U	0.491	pCi/L	N/A		N/A			
	Uncertainty	+/-4.04		+/-4.29							
Iron-59	U	-0.918	U	15.3	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-9.61							
Lead-210	U	187	U	-1140	pCi/L	N/A		N/A			
	Uncertainty	+/-1520		+/-696							
Lead-212	U	0.977	U	-2.09	pCi/L	N/A		N/A			
	Uncertainty	+/-8.73		+/-7.90							
Lead-214	U	5.56	U	-0.409	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-10.1							
Manganese-54	U	1.21	U	-0.0687	pCi/L	N/A		N/A			
	Uncertainty	+/-3.18		+/-3.56							
Mercury-203	U	-1.01	U	-0.382	pCi/L	N/A		N/A			
	Uncertainty	+/-4.20		+/-4.67							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Neodymium-147	U	-2.67	U	-21	pCi/L	N/A		N/A			
	Uncertainty	+/-72.4		+/-94.4							
Neptunium-239	U	22.1	U	-9.5	pCi/L	N/A		N/A	RXF2	02/04/14	08:56
	Uncertainty	+/-27.6		+/-33.6							
Niobium-94	U	-0.442	U	-1.04	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-3.57							
Niobium-95	U	1.43	U	-0.334	pCi/L	N/A		N/A			
	Uncertainty	+/-3.71		+/-4.66							
Potassium-40	U	22.7	U	-40.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.2		+/-46.5							
Promethium-144	U	2.22	U	2.64	pCi/L	N/A		N/A			
	Uncertainty	+/-3.59		+/-3.79							
Promethium-146	U	-0.27	U	3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-4.61							
Radium-228	U	1.99	U	-16.3	pCi/L	N/A		N/A			
	Uncertainty	+/-20.7		+/-16.7							
Ruthenium-106	U	-5.97	U	20.7	pCi/L	N/A		N/A			
	Uncertainty	+/-34.6		+/-36.5							
Silver-110m	U	-1.96	U	-1.53	pCi/L	N/A		N/A			
	Uncertainty	+/-3.27		+/-3.86							
Sodium-22	U	-1.79	U	-1.66	pCi/L	N/A		N/A			
	Uncertainty	+/-4.21		+/-3.37							
Thallium-208	U	-7.87	U	0.837	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-5.02							
Thorium-230	U	-3010	U	683	pCi/L	N/A		N/A			
	Uncertainty	+/-1850		+/-1360							
Thorium-234	U	-119	U	85.6	pCi/L	N/A		N/A			
	Uncertainty	+/-257		+/-216							
Tin-113	U	-1.14	U	-0.713	pCi/L	N/A		N/A			
	Uncertainty	+/-4.48		+/-4.96							
Uranium-235	U	2.82	U	-12.9	pCi/L	N/A		N/A			
	Uncertainty	+/-24.8		+/-27.6							
Uranium-238	U	-119	U	85.6	pCi/L	N/A		N/A			
	Uncertainty	+/-257		+/-216							
Yttrium-88	U	-0.148	U	9.81	pCi/L	N/A		N/A			
	Uncertainty	+/-3.93		+/-9.83							
Zinc-65	U	3.88	U	-2.94	pCi/L	N/A		N/A			
	Uncertainty	+/-7.58		+/-8.86							
Zirconium-95	U	-7.83	U	-1.75	pCi/L	N/A		N/A			
	Uncertainty	+/-7.97		+/-7.03							
QC1203023712	LCS										
Actinium-228			U	-15.3	pCi/L					01/27/14	11:59
	Uncertainty			+/-539							
Americium-241	1.11E+05			1.24E+05	pCi/L		112	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
				+/-1540							
Antimony-124			U	-100	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-109							
Antimony-125			U	-463	pCi/L						
	Uncertainty			+/-283							
Barium-133			U	-9.71	pCi/L						
	Uncertainty			+/-115							
Barium-140			U	18.0	pCi/L						
	Uncertainty			+/-70.8							
Beryllium-7			U	287	pCi/L						
	Uncertainty			+/-900							
Bismuth-212			U	-911	pCi/L						
	Uncertainty			+/-1470							
Bismuth-214			U	29.7	pCi/L						
	Uncertainty			+/-192							
Cerium-139				2230	pCi/L						
	Uncertainty			+/-119							
Cerium-141			U	-33.3	pCi/L						
	Uncertainty			+/-117							
Cerium-144			U	-36.1	pCi/L						
	Uncertainty			+/-563							
Cesium-134			U	116	pCi/L						
	Uncertainty			+/-130							
Cesium-136			U	-4.84	pCi/L						
	Uncertainty			+/-202							
Cesium-137	45400			47200	pCi/L		104	(75%-125%)			
	Uncertainty			+/-432							
Chromium-51			U	157	pCi/L						
	Uncertainty			+/-750							
Cobalt-56			U	-89.1	pCi/L						
	Uncertainty			+/-124							
Cobalt-57				6990	pCi/L						
	Uncertainty			+/-151							
Cobalt-58			U	77.3	pCi/L						
	Uncertainty			+/-116							
Cobalt-60	59500			60700	pCi/L		102	(75%-125%)			
	Uncertainty			+/-552							
Europium-152			U	-130	pCi/L						
	Uncertainty			+/-267							
Europium-154			U	64.8	pCi/L						
	Uncertainty			+/-201							
Europium-155			U	-95.6	pCi/L						
	Uncertainty			+/-287							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Iridium-192			U	51.7	pCi/L						
	Uncertainty			+/-89.6							
Iron-59			U	74.4	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-267							
Lead-210				1.39E+06	pCi/L						
	Uncertainty			+/-26000							
Lead-212			U	-22.9	pCi/L						
	Uncertainty			+/-157							
Lead-214			U	33.0	pCi/L						
	Uncertainty			+/-201							
Manganese-54			U	49.5	pCi/L						
	Uncertainty			+/-116							
Mercury-203			U	56.8	pCi/L						
	Uncertainty			+/-90.2							
Neodymium-147			U	-405	pCi/L						
	Uncertainty			+/-797							
Neptunium-239			U	730	pCi/L						
	Uncertainty			+/-848							
Niobium-94			U	-11.6	pCi/L						
	Uncertainty			+/-94.5							
Niobium-95			U	46.9	pCi/L						
	Uncertainty			+/-111							
Potassium-40			U	-70.9	pCi/L						
	Uncertainty			+/-500							
Promethium-144			U	85.6	pCi/L						
	Uncertainty			+/-95.0							
Promethium-146			U	23.2	pCi/L						
	Uncertainty			+/-138							
Radium-228			U	-15.3	pCi/L						
	Uncertainty			+/-539							
Ruthenium-106			U	77.0	pCi/L						
	Uncertainty			+/-897							
Silver-110m				1710	pCi/L						
	Uncertainty			+/-138							
Sodium-22			U	35.1	pCi/L						
	Uncertainty			+/-70.4							
Thallium-208			U	-88.4	pCi/L						
	Uncertainty			+/-116							
Thorium-230				65200	pCi/L						
	Uncertainty			+/-45400							
Thorium-234			U	-5950	pCi/L						
	Uncertainty			+/-6450							
Tin-113				1710	pCi/L						
	Uncertainty			+/-198							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361916										
Uranium-235			U	-388	pCi/L						
	Uncertainty			+/-479							
Uranium-238			U	-5950	pCi/L				RXF2	01/27/14	11:59
	Uncertainty			+/-6450							
Yttrium-88				2240	pCi/L						
	Uncertainty			+/-158							
Zinc-65				24300	pCi/L						
	Uncertainty			+/-711							
Zirconium-95			U	75.9	pCi/L						
	Uncertainty			+/-198							
QC1203023710	MB										
Actinium-228			U	-5.34	pCi/L					01/28/14	08:42
	Uncertainty			+/-13.8							
Americium-241			U	-6.14	pCi/L						
	Uncertainty			+/-14.3							
Antimony-124			U	5.12	pCi/L						
	Uncertainty			+/-7.28							
Antimony-125			U	5.14	pCi/L						
	Uncertainty			+/-8.09							
Barium-133			U	-3.03	pCi/L						
	Uncertainty			+/-4.72							
Barium-140			U	-0.408	pCi/L						
	Uncertainty			+/-3.99							
Beryllium-7			U	-20.4	pCi/L						
	Uncertainty			+/-24.0							
Bismuth-212			U	33.2	pCi/L						
	Uncertainty			+/-43.3							
Bismuth-214			U	1.34	pCi/L						
	Uncertainty			+/-9.97							
Cerium-139			U	-0.318	pCi/L						
	Uncertainty			+/-2.47							
Cerium-141			U	-0.755	pCi/L						
	Uncertainty			+/-4.56							
Cerium-144			U	2.92	pCi/L						
	Uncertainty			+/-15.9							
Cesium-134			U	0.529	pCi/L						
	Uncertainty			+/-3.37							
Cesium-136			U	-6.06	pCi/L						
	Uncertainty			+/-5.14							
Cesium-137			U	4.48	pCi/L						
	Uncertainty			+/-4.73							
Chromium-51			U	26.2	pCi/L						
	Uncertainty			+/-25.7							
Cobalt-56			U	1.51	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361916										
Cobalt-57				+/-3.14							
			U	0.414	pCi/L				RXF2	01/28/14	08:42
Cobalt-58	Uncertainty			+/-2.10							
			U	-2.31	pCi/L						
Cobalt-60	Uncertainty			+/-3.11							
			U	0.308	pCi/L						
Europium-152	Uncertainty			+/-3.27							
			U	4.64	pCi/L						
Europium-154	Uncertainty			+/-9.20							
			U	-1.08	pCi/L						
Europium-155	Uncertainty			+/-9.23							
			U	-8.76	pCi/L						
Iridium-192	Uncertainty			+/-9.00							
			U	-1.47	pCi/L						
Iron-59	Uncertainty			+/-3.11							
			U	0.304	pCi/L						
Lead-210	Uncertainty			+/-6.03							
			U	27.2	pCi/L						
Lead-212	Uncertainty			+/-428							
			U	8.37	pCi/L						
Lead-214	Uncertainty			+/-11.0							
			U	4.45	pCi/L						
Manganese-54	Uncertainty			+/-11.4							
			U	-1.31	pCi/L						
Mercury-203	Uncertainty			+/-3.10							
			U	-1.84	pCi/L						
Neodymium-147	Uncertainty			+/-2.92							
			U	9.76	pCi/L						
Neptunium-239	Uncertainty			+/-26.2							
			U	-15.3	pCi/L						
Niobium-94	Uncertainty			+/-22.9							
			U	0.0786	pCi/L						
Niobium-95	Uncertainty			+/-3.09							
			U	-1.44	pCi/L						
Potassium-40	Uncertainty			+/-3.09							
			U	-3.2	pCi/L						
Promethium-144	Uncertainty			+/-42.3							
			U	0.199	pCi/L						
Promethium-146	Uncertainty			+/-3.08							
			U	1.18	pCi/L						
Radium-228	Uncertainty			+/-4.09							
			U	-5.34	pCi/L						
	Uncertainty			+/-13.8							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361916										
Ruthenium-106			U	-1.46	pCi/L						
	Uncertainty			+/-30.5							
Silver-110m			U	-0.383	pCi/L				RXF2	01/28/14	08:42
	Uncertainty			+/-3.40							
Sodium-22			U	-0.228	pCi/L						
	Uncertainty			+/-3.26							
Thallium-208			U	1.40	pCi/L						
	Uncertainty			+/-5.40							
Thorium-230			U	14.3	pCi/L						
	Uncertainty			+/-969							
Thorium-234			U	38.6	pCi/L						
	Uncertainty			+/-176							
Tin-113			U	1.21	pCi/L						
	Uncertainty			+/-3.79							
Uranium-235			U	-8.08	pCi/L						
	Uncertainty			+/-19.2							
Uranium-238			U	38.6	pCi/L						
	Uncertainty			+/-176							
Yttrium-88			U	-0.426	pCi/L						
	Uncertainty			+/-3.39							
Zinc-65			U	-5.78	pCi/L						
	Uncertainty			+/-6.33							
Zirconium-95			U	-1.25	pCi/L						
	Uncertainty			+/-4.59							
Batch	1361919										
QC1203023714 341588021 DUP											
Actinium-228	U	-5.69	U	3.51	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-16.1		+/-20.9							
Americium-241	U	-12.7	U	-19.2	pCi/L	N/A		N/A			
	Uncertainty	+/-21.4		+/-19.8							
Antimony-124	U	-0.823	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-7.13		+/-8.30							
Antimony-125	U	3.25	U	-1.72	pCi/L	N/A		N/A			
	Uncertainty	+/-8.56		+/-13.4							
Barium-133	U	0.929	U	5.01	pCi/L	N/A		N/A			
	Uncertainty	+/-4.08		+/-5.88							
Barium-140	U	0.253	U	-6.49	pCi/L	N/A		N/A			
	Uncertainty	+/-6.51		+/-9.87							
Beryllium-7	U	2.71	U	13.2	pCi/L	N/A		N/A			
	Uncertainty	+/-27.4		+/-37.6							
Bismuth-212	U	-9.25	U	-19.9	pCi/L	N/A		N/A			
	Uncertainty	+/-53.8		+/-70.5							
Bismuth-214		20.8	U	18.8	pCi/L	5.95		(0% - 100%)			
	Uncertainty	+/-12.4		+/-14.2							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Cerium-139	U	-2.0	U	-0.638	pCi/L	N/A		N/A			
	Uncertainty	+/-3.11		+/-3.65							
Cerium-141	U	-1.91	U	5.99	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-5.75		+/-7.22							
Cerium-144	U	0.631	U	2.48	pCi/L	N/A		N/A			
	Uncertainty	+/-19.4		+/-24.9							
Cesium-134	U	1.16	U	1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-4.69							
Cesium-136	U	2.01	U	-4.83	pCi/L	N/A		N/A			
	Uncertainty	+/-7.51		+/-7.54							
Cesium-137	U	2.65	U	3.40	pCi/L	N/A		N/A			
	Uncertainty	+/-4.36		+/-4.92							
Chromium-51	U	-16	U	-2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-32.6		+/-43.4							
Cobalt-56	U	0.950	U	-2.54	pCi/L	N/A		N/A			
	Uncertainty	+/-3.58		+/-4.44							
Cobalt-57	U	-0.078	U	-1.7	pCi/L	N/A		N/A			
	Uncertainty	+/-2.46		+/-3.02							
Cobalt-58	U	-4.02	U	-1.54	pCi/L	N/A		N/A			
	Uncertainty	+/-2.87		+/-5.69							
Cobalt-60	U	2.72	U	2.52	pCi/L	N/A		N/A			
	Uncertainty	+/-3.47		+/-3.37							
Europium-152	U	-6.23	U	4.26	pCi/L	N/A		N/A			
	Uncertainty	+/-9.44		+/-12.8							
Europium-154	U	-10.1	U	-12.9	pCi/L	N/A		N/A			
	Uncertainty	+/-8.52		+/-13.9							
Europium-155	U	1.05	U	4.04	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-13.2							
Iridium-192	U	5.01	U	1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-6.52		+/-4.24							
Iron-59	U	1.89	U	2.12	pCi/L	N/A		N/A			
	Uncertainty	+/-7.09		+/-9.12							
Lead-210	U	695	U	-360	pCi/L	N/A		N/A			
	Uncertainty	+/-1100		+/-588							
Lead-212	U	-0.813	U	6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-7.62		+/-9.60							
Lead-214	UI	0.00	U	7.54	pCi/L	N/A		N/A			
	Uncertainty	+/-13.9		+/-14.2							
Manganese-54	U	3.74	U	1.19	pCi/L	N/A		N/A			
	Uncertainty	+/-3.50		+/-4.51							
Mercury-203	U	-1.09	U	1.04	pCi/L	N/A		N/A			
	Uncertainty	+/-3.25		+/-4.86							
Neodymium-147	U	-18.1	U	-17.2	pCi/L	N/A		N/A			
	Uncertainty	+/-32.9		+/-54.9							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Neptunium-239	U	-26.7	U	-2.49	pCi/L	N/A		N/A			
	Uncertainty	+/-25.8		+/-32.5							
Niobium-94	U	3.02	U	-0.0567	pCi/L	N/A		N/A	RXF2	01/27/14	07:53
	Uncertainty	+/-4.69		+/-3.98							
Niobium-95	U	1.33	U	-1.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.75		+/-4.67							
Potassium-40	U	-43.3	U	9.59	pCi/L	N/A		N/A			
	Uncertainty	+/-53.4		+/-55.9							
Promethium-144	U	0.0463	U	-1.5	pCi/L	N/A		N/A			
	Uncertainty	+/-3.90		+/-4.02							
Promethium-146	U	-0.355	U	1.26	pCi/L	N/A		N/A			
	Uncertainty	+/-4.12		+/-5.59							
Radium-228	U	-5.69	U	3.51	pCi/L	N/A		N/A			
	Uncertainty	+/-16.1		+/-20.9							
Ruthenium-106	U	6.58	U	26.4	pCi/L	N/A		N/A			
	Uncertainty	+/-27.8		+/-36.7							
Silver-110m	U	-1.6	U	-0.0595	pCi/L	N/A		N/A			
	Uncertainty	+/-3.32		+/-4.15							
Sodium-22	U	-3.67	U	-4.48	pCi/L	N/A		N/A			
	Uncertainty	+/-2.98		+/-4.85							
Thallium-208	U	2.94	U	5.44	pCi/L	N/A		N/A			
	Uncertainty	+/-5.31		+/-6.61							
Thorium-230	U	186	U	546	pCi/L	N/A		N/A			
	Uncertainty	+/-1400		+/-1320							
Thorium-234	U	-71.6	U	-189	pCi/L	N/A		N/A			
	Uncertainty	+/-227		+/-189							
Tin-113	U	1.29	U	0.171	pCi/L	N/A		N/A			
	Uncertainty	+/-4.19		+/-5.58							
Uranium-235	U	11.0	U	-4.91	pCi/L	N/A		N/A			
	Uncertainty	+/-27.9		+/-29.0							
Uranium-238	U	-71.6	U	-189	pCi/L	N/A		N/A			
	Uncertainty	+/-227		+/-189							
Yttrium-88	U	-2.01	U	1.16	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.39							
Zinc-65	U	-0.129	U	-7.59	pCi/L	N/A		N/A			
	Uncertainty	+/-8.76		+/-7.72							
Zirconium-95	U	1.06	U	-1.44	pCi/L	N/A		N/A			
	Uncertainty	+/-6.36		+/-7.76							
QC1203023715	LCS										
Actinium-228			U	-98.2	pCi/L					01/25/14	10:40
	Uncertainty			+/-280							
Americium-241	34500			37400	pCi/L		108	(75%-125%)			
	Uncertainty			+/-1150							
Antimony-124			U	17.5	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1361919										
Antimony-125				+/-46.1							
			U	-3.52	pCi/L				RXF2	01/25/14	10:40
Barium-133				+/-158							
	Uncertainty		U	-5.43	pCi/L						
Barium-140				+/-83.1							
	Uncertainty		U	-5.81	pCi/L						
Beryllium-7				+/-28.1							
	Uncertainty		U	-241	pCi/L						
Bismuth-212				+/-495							
	Uncertainty		U	146	pCi/L						
Bismuth-214				+/-796							
	Uncertainty		U	69.2	pCi/L						
Cerium-139				+/-109							
	Uncertainty			658	pCi/L						
Cerium-141				+/-85.6							
	Uncertainty		U	32.7	pCi/L						
Cerium-144				+/-78.9							
	Uncertainty		U	335	pCi/L						
Cesium-134				+/-390							
	Uncertainty		U	-18.7	pCi/L						
Cesium-136				+/-70.1							
	Uncertainty		U	11.4	pCi/L						
Cesium-137				+/-95.2							
	14200			14600	pCi/L		103	(75%-125%)			
Chromium-51				+/-239							
	Uncertainty		U	-411	pCi/L						
Cobalt-56				+/-459							
	Uncertainty		U	33.3	pCi/L						
Cobalt-57				+/-68.2							
	Uncertainty			2170	pCi/L						
Cobalt-58				+/-97.7							
	Uncertainty		U	10.6	pCi/L						
Cobalt-60				+/-73.3							
	18600			18700	pCi/L		101	(75%-125%)			
Europium-152				+/-288							
	Uncertainty		U	-73.2	pCi/L						
Europium-154				+/-167							
	Uncertainty		U	15.8	pCi/L						
Europium-155				+/-99.6							
	Uncertainty		U	-55.1	pCi/L						
Iridium-192				+/-218							
	Uncertainty		U	31.6	pCi/L						
				+/-53.5							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Iron-59			U	138	pCi/L						
	Uncertainty			+/-131							
Lead-210				4.46E+05	pCi/L				RXF2	01/25/14	10:40
	Uncertainty			+/-27500							
Lead-212			U	-1.7	pCi/L						
	Uncertainty			+/-101							
Lead-214			U	39.0	pCi/L						
	Uncertainty			+/-145							
Manganese-54			U	57.0	pCi/L						
	Uncertainty			+/-65.0							
Mercury-203			U	-0.10	pCi/L						
	Uncertainty			+/-53.7							
Neodymium-147			U	71.9	pCi/L						
	Uncertainty			+/-390							
Neptunium-239			U	277	pCi/L						
	Uncertainty			+/-631							
Niobium-94			U	10.3	pCi/L						
	Uncertainty			+/-52.4							
Niobium-95			U	-9.81	pCi/L						
	Uncertainty			+/-58.9							
Potassium-40			U	234	pCi/L						
	Uncertainty			+/-244							
Promethium-144			U	-26.2	pCi/L						
	Uncertainty			+/-51.5							
Promethium-146			U	5.63	pCi/L						
	Uncertainty			+/-77.4							
Radium-228			U	-98.2	pCi/L						
	Uncertainty			+/-280							
Ruthenium-106			U	-357	pCi/L						
	Uncertainty			+/-507							
Silver-110m				566	pCi/L						
	Uncertainty			+/-72.8							
Sodium-22			U	1.54	pCi/L						
	Uncertainty			+/-35.1							
Thallium-208			U	30.9	pCi/L						
	Uncertainty			+/-60.0							
Thorium-230				50800	pCi/L						
	Uncertainty			+/-29700							
Thorium-234			U	-8310	pCi/L						
	Uncertainty			+/-3880							
Tin-113				573	pCi/L						
	Uncertainty			+/-106							
Uranium-235			U	167	pCi/L						
	Uncertainty			+/-337							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Uranium-238			U	-8310	pCi/L						
	Uncertainty			+/-3880							
Yttrium-88				624	pCi/L				RXF2	01/25/14	10:40
	Uncertainty			+/-61.6							
Zinc-65				7570	pCi/L						
	Uncertainty			+/-334							
Zirconium-95			U	-49.7	pCi/L						
	Uncertainty			+/-103							
QC1203023713	MB										
Actinium-228			U	2.34	pCi/L					01/30/14	18:41
	Uncertainty			+/-8.48							
Americium-241			U	-7.42	pCi/L						
	Uncertainty			+/-11.7							
Antimony-124			U	2.48	pCi/L						
	Uncertainty			+/-3.44							
Antimony-125			U	-3.65	pCi/L						
	Uncertainty			+/-4.15							
Barium-133			U	-2.21	pCi/L						
	Uncertainty			+/-2.16							
Barium-140			U	-0.593	pCi/L						
	Uncertainty			+/-2.29							
Beryllium-7			U	-7.33	pCi/L						
	Uncertainty			+/-13.4							
Bismuth-212			U	32.3	pCi/L						
	Uncertainty			+/-28.6							
Bismuth-214			U	2.59	pCi/L						
	Uncertainty			+/-5.20							
Cerium-139			U	-1.68	pCi/L						
	Uncertainty			+/-1.46							
Cerium-141			U	-2.03	pCi/L						
	Uncertainty			+/-3.73							
Cerium-144			U	5.60	pCi/L						
	Uncertainty			+/-10.2							
Cesium-134			U	0.669	pCi/L						
	Uncertainty			+/-1.60							
Cesium-136			U	-0.621	pCi/L						
	Uncertainty			+/-2.70							
Cesium-137			U	-0.0384	pCi/L						
	Uncertainty			+/-1.72							
Chromium-51			U	0.944	pCi/L						
	Uncertainty			+/-16.0							
Cobalt-56			U	-0.435	pCi/L						
	Uncertainty			+/-1.80							
Cobalt-57			U	1.74	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Cobalt-58				+/-1.29							
			U	-0.476	pCi/L				RXF2	01/30/14	18:41
Cobalt-60	Uncertainty			+/-1.46							
			U	-0.611	pCi/L						
Europium-152	Uncertainty			+/-1.74							
			U	3.88	pCi/L						
Europium-154	Uncertainty			+/-4.91							
			U	-2.15	pCi/L						
Europium-155	Uncertainty			+/-4.67							
			U	4.46	pCi/L						
Iridium-192	Uncertainty			+/-5.80							
			U	-0.846	pCi/L						
Iron-59	Uncertainty			+/-1.67							
			U	-0.053	pCi/L						
Lead-210	Uncertainty			+/-3.05							
			U	125	pCi/L						
Lead-212	Uncertainty			+/-409							
			U	-3.9	pCi/L						
Lead-214	Uncertainty			+/-4.38							
			U	-1.79	pCi/L						
Manganese-54	Uncertainty			+/-5.54							
			U	-0.708	pCi/L						
Mercury-203	Uncertainty			+/-1.63							
			U	0.499	pCi/L						
Neodymium-147	Uncertainty			+/-1.70							
			U	-7.14	pCi/L						
Neptunium-239	Uncertainty			+/-15.6							
			U	-1.83	pCi/L						
Niobium-94	Uncertainty			+/-13.7							
			U	0.261	pCi/L						
Niobium-95	Uncertainty			+/-1.65							
			U	0.254	pCi/L						
Potassium-40	Uncertainty			+/-1.69							
			U	-6.44	pCi/L						
Promethium-144	Uncertainty			+/-26.8							
			U	-0.327	pCi/L						
Promethium-146	Uncertainty			+/-1.70							
			U	1.88	pCi/L						
Radium-228	Uncertainty			+/-2.07							
			U	2.34	pCi/L						
Ruthenium-106	Uncertainty			+/-8.48							
			U	-2.64	pCi/L						
	Uncertainty			+/-16.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1361919										
Silver-110m			U	-1.75	pCi/L						
	Uncertainty			+/-1.60							
Sodium-22			U	-0.845	pCi/L				RXF2	01/30/14	18:41
	Uncertainty			+/-1.63							
Thallium-208			U	-1.27	pCi/L						
	Uncertainty			+/-2.56							
Thorium-230			U	-736	pCi/L						
	Uncertainty			+/-907							
Thorium-234			U	-15.9	pCi/L						
	Uncertainty			+/-134							
Tin-113			U	-1.22	pCi/L						
	Uncertainty			+/-2.10							
Uranium-235			U	-6.22	pCi/L						
	Uncertainty			+/-14.3							
Uranium-238			U	-15.9	pCi/L						
	Uncertainty			+/-134							
Yttrium-88			U	1.07	pCi/L						
	Uncertainty			+/-1.68							
Zinc-65			U	-0.601	pCi/L						
	Uncertainty			+/-4.24							
Zirconium-95			U	0.163	pCi/L						
	Uncertainty			+/-3.09							
<b>Rad Gas Flow</b>											
Batch	1362035										
QC1203024016	341588001	DUP									
Alpha			U	4.45	U	2.98	pCi/L	N/A		N/A JAOC	01/31/14 13:14
	Uncertainty			+/-3.44		+/-3.08					
Beta				22.9		15.7	pCi/L	37.1		(0% - 100%)	
	Uncertainty			+/-4.43		+/-3.04					
QC1203024019	LCS										
Alpha				123		136	pCi/L		110	(75%-125%)	01/31/14 13:14
	Uncertainty					+/-12.6					
Beta				457		491	pCi/L		108	(75%-125%)	
	Uncertainty					+/-17.8					
QC1203024015	MB										
Alpha			U	0.912		0.912	pCi/L				01/31/14 13:14
	Uncertainty					+/-2.58					
Beta			U	-0.831		-0.831	pCi/L				
	Uncertainty					+/-1.85					
QC1203024017	341588001	MS									
Alpha			494 U	4.45		521	pCi/L		106	(75%-125%)	01/31/14 13:14
	Uncertainty			+/-3.44		+/-56.2					
Beta			1830	22.9		2180	pCi/L		118	(75%-125%)	
	Uncertainty			+/-4.43		+/-81.5					
QC1203024018	341588001	MSD									

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1362035										
Alpha	494	U	4.45	496	pCi/L	4.98	100	(0%-20%)		01/31/14	13:14
	Uncertainty		+/-3.44	+/-53.3							
Beta	1830		22.9	1990	pCi/L	9.24	108	(0%-20%)	JAOC		
	Uncertainty		+/-4.43	+/-72.4							
Batch	1362036										
QC1203024025	341588016	DUP									
Alpha		U	1.67	U	2.30	pCi/L	N/A		N/A	JAOC	02/02/14 17:52
		Uncertainty	+/-2.83		+/-2.90						
Beta			11.6		9.11	pCi/L	24.3	(0% - 100%)			
		Uncertainty	+/-2.83		+/-2.45						
QC1203024028	LCS										
Alpha			123		132	pCi/L		107	(75%-125%)		02/02/14 18:28
			Uncertainty		+/-12.3						
Beta			457		504	pCi/L		110	(75%-125%)		
			Uncertainty		+/-17.9						
QC1203024024	MB										
Alpha				U	-3.84	pCi/L					02/02/14 17:49
					+/-1.29						
Beta				U	-0.028	pCi/L					
					+/-2.73						
QC1203024026	341588016	MS									
Alpha		U	1.67		597	pCi/L		121	(75%-125%)		02/05/14 12:52
		Uncertainty	+/-2.83		+/-56.2						
Beta			1830		1940	pCi/L		106	(75%-125%)		
		Uncertainty	+/-2.83		+/-71.1						
QC1203024027	341588016	MSD									
Alpha		U	1.67		526	pCi/L	12.7	106	(0%-20%)		02/02/14 17:52
		Uncertainty	+/-2.83		+/-52.7						
Beta			1830		2040	pCi/L	5.10	111	(0%-20%)		
		Uncertainty	+/-2.83		+/-72.9						
<b>Rad Liquid Scintillation</b>											
Batch	1361889										
QC1203023630	341588001	DUP									
Technetium-99		U	44.7	U	58.4	pCi/L	N/A		N/AMYM1		01/28/14 14:09
		Uncertainty	+/-136		+/-137						
QC1203023631	LCS										
Technetium-99			4340		4300	pCi/L		98.9	(75%-125%)		01/28/14 14:26
			Uncertainty		+/-274						
QC1203023629	MB										
Technetium-99				U	17.1	pCi/L					01/28/14 13:53
					+/-131						
Batch	1361891										
QC1203023636	341588016	DUP									
Technetium-99		U	50.6	U	-6.74	pCi/L	N/A		N/AMYM1		01/31/14 15:59
		Uncertainty	+/-111		+/-112						
QC1203023637	LCS										



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 341588

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1361891										
Technetium-99	4340			3940	pCi/L		90.6	(75%-125%)		01/31/14	09:53
	Uncertainty			+/-230							
QC1203023635	MB										
Technetium-99			U	-4.64	pCi/L				MYM1	01/31/14	15:42
	Uncertainty			+/-112							
Batch	1363711										
QC1203028445	341588005	DUP									
Technetium-99		180		246	pCi/L	30.8		(0% - 100%)	MYM1	02/04/14	08:18
	Uncertainty	+/-108		+/-111							
QC1203028446	LCS										
Technetium-99	4340			4290	pCi/L		98.7	(75%-125%)		02/04/14	08:34
	Uncertainty			+/-218							
QC1203028444	MB										
Technetium-99			U	126	pCi/L					02/04/14	08:02
	Uncertainty			+/-108							

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J 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, 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.

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## QC Summary

Workorder: 341588

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 12 February 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	RW-2		
Weather Conditions	Air Temperature		
Total Well Depth (TWD) =	31.25		
Depth To Groundwater (DGW) =	18.10		
Length Of Water Column (LWC) =	13.15		
1 Casing Volume (OCV) = LWC x	0.163	=	2.1
3 Casing Volumes =	6.4	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =			
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

**5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61**

### Field Analyses

VOLUME PURGED (GALLONS)	1st	2.1	4.2	6.4	Well Sample Time: 0950
TIME (24 HOUR SYSTEM)	0935	0940	0944	0949	Remarks:
pH (SU)	3.88	3.56	3.57	3.52	
WATER TEMPERATURE (°C.)	18.6	18.3	18.1	17.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	332.7	331.7	329.5	329	
TURBIDITY (SUBJECTIVE)*	7.000	0.74	38.2	55.7	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	W-26	Air Temperature	°C.
Weather Conditions			
Total Well Depth (TWD) =		32.00	
Depth To Groundwater (DGW) =		24.93	
Length Of Water Column (LWC) =		7.07	
1 Casing Volume (OCV) = LWC x 0.163		= 1.2 gal.	
3 Casing Volumes = 3.5		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation		(TB) SSB	WW GP Other
Method of Sample Collection		(TB) SSB	WW GP Other

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1.2	2.4	3.6	Well Sample Time: 1042
TIME (24 HOUR SYSTEM)	1032	1036	1040	Remarks:
pH (SU)	5.17	5.18	5.14	
WATER TEMPERATURE (°C.)	14.6	14.3	14.0	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	163.9	157	152.3	
TURBIDITY (SUBJECTIVE)*	178	113	51	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 4, 2014	
Field Personnel		BTF	
Facility Name		Westinghouse	
Well ID #	MW-41		
Weather Conditions		Air Temperature	
Total Well Depth (TWD) = 27.05			
Depth To Groundwater (DGW) = 15.34			
Length Of Water Column (LWC) = 11.71			
1 Casing Volume (OCV) = LWC x	0.163	=	1.9 gal.
3 Casing Volumes =	5.7	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =			
Method of Well Evacuation	(TB)	SSB	WW GP Other
Method of Sample Collection	(TB)	SSB	WW GP Other

### Evacuation and Collection Methods

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

### Constants for Casing Diameters

1.5" = 0.092  
2" = 0.163  
3" = 0.367  
4" = 0.652  
5" = 1.02  
6" = 1.47  
7" = 2.00  
8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	1.9	3.8	5.7	Well Sample Time: 10/5
TIME (24 HOUR SYSTEM)	1604	1007	1010	Remarks:
pH (SU)	5.05	5.16	5.23	
WATER TEMPERATURE (°C.)	18	18.5	19.4	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	482	490	491	
TURBIDITY (SUBJECTIVE)*	71660	43	57.6	
ODOR (SUBJECTIVE)**	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 4, 2014		Casing Diameter:	2 1/4 inches	Casing Material:	PVC - Metal
Field Personnel	BTF		Guard Pipe:	PVC - Metal	Locking Cap:	Y - N
Facility Name	Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #	W-48		Well Yield:	Low - Mod. - High		
Weather Conditions	Air Temperature		Remarks:			
Total Well Depth (TWD) =	44.00					
Depth To Groundwater (DGW) =	25.87					
Length Of Water Column (LWC) =	18.16					
1 Casing Volume (OCV) = LWC x $\frac{\pi}{4} \times \text{ID}^2 \times \text{Length}$	0.652 = 11.8 gal.					
3 Casing Volumes =	35.4 gal. = Standard Evacuation Volume					
Total Volume of Water Removed =						
Method of Well Evacuation	TB	SSB	WW	GP	Other	
Method of Sample Collection	TB	SSB	WW	GP	Other	

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	1.5	11.8	23.6		Well Sample Time:	1120
TIME (24 HOUR SYSTEM)	1100	1106	1114		Remarks:	
pH (SU)	5.11	5.12	5.19			017 C236
WATER TEMPERATURE (°C.)	21.1	20.8	21.3			
SPECIFIC CONDUCTIVITY (UMHOS/CM)	125.8	120.2	107.6			
TURBIDITY (SUBJECTIVE)*	151	16.6	18.7			
ODOR (SUBJECTIVE)**	1	1	1			

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Quarterly GWM

Lot Number: PD04066  
Date Completed: 04/09/2014



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PDO4066 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PD04066

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PD04066

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	04/04/2014 0950	04/04/2014
002	W-26	Aqueous	04/04/2014 1042	04/04/2014
003	MW-41	Aqueous	04/04/2014 1015	04/04/2014
004	W-48	Aqueous	04/04/2014 1120	04/04/2014

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PD04066

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	110		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	8.4		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	170		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	23		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.2		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	2.9		ug/L	22

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 04/04/2014 0950	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/04/2014 0950	BTF		
1		(Specific Con) 120.1	1	04/04/2014 0950	BTF		
1		(Temperature ) SM 2550B-2010	1	04/04/2014 0950	BTF		
1		(Water level )	1	04/04/2014 0950	BTF		
1		(Well Depth)	1	04/04/2014 0950	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	3.52			su	1
Specific Conductance @ 25° C - Field		120.1	329		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.9			° C	1
Water level depth from top of casing		No Method	18.10			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/04/2014 0950							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1748	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/04/2014 0950							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1748	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	110		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	8.4		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 04/04/2014 0950

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1328	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 04/04/2014 0950

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1328	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		90	41-144
2-Fluorobiphenyl		94	37-129
2-Fluorophenol		86	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		89	28-128
Terphenyl-d14		71	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-002
Description: W-26	Matrix: Aqueous
Date Sampled: 04/04/2014 1042	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/04/2014 1042	BTF		
1		(Specific Con) 120.1	1	04/04/2014 1042	BTF		
1		(Temperature ) SM 2550B-2010	1	04/04/2014 1042	BTF		
1		(Water level )	1	04/04/2014 1042	BTF		
1		(Well Depth)	1	04/04/2014 1042	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.11			su	1
Specific Conductance @ 25° C - Field		120.1	153		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.8			° C	1
Water level depth from top of casing		No Method	24.93			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/04/2014 1042							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1725	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/04/2014 1042							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/08/2014 1725	ALL		44284

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-002

Description: W-26

Matrix: Aqueous

Date Sampled: 04/04/2014 1042

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1352	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-002

Description: W-26

Matrix: Aqueous

Date Sampled: 04/04/2014 1042

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1352	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		98	41-144
2-Fluorobiphenyl		99	37-129
2-Fluorophenol		90	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		93	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PD04066-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 04/04/2014 1015	
Date Received: 04/04/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/04/2014 1015	BTF		
1		(Specific Con) 120.1	1	04/04/2014 1015	BTF		
1		(Temperature ) SM 2550B-2010	1	04/04/2014 1015	BTF		
1		(Water level )	1	04/04/2014 1015	BTF		
1		(Well Depth)	1	04/04/2014 1015	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	18.9			su	1
Specific Conductance @ 25° C - Field		120.1	491		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.9			° C	1
Water level depth from top of casing		No Method	15.34			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/04/2014 1015							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0254	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/04/2014 1015							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0254	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	23		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 04/04/2014 1015

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1415	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 04/04/2014 1015

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1415	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		87	41-144
2-Fluorobiphenyl		96	37-129
2-Fluorophenol		84	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		89	28-128
Terphenyl-d14		89	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	04/04/2014 1120	BTF		
1		(Specific Con) 120.1	1	04/04/2014 1120	BTF		
1	(Temperature )	SM 2550B-2010	1	04/04/2014 1120	BTF		
1		(Water level )	1	04/04/2014 1120	BTF		
1		(Well Depth)	1	04/04/2014 1120	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.19			su	1
Specific Conductance @ 25° C - Field		120.1	108		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.3			° C	1
Water level depth from top of casing		No Method	25.84			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/04/2014 1120							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0118	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.2		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PD04066-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/04/2014 1120							
Date Received: 04/04/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/09/2014 0118	PMM2		44324

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	2.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		105	70-130

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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1438	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PD04066-004

Description: W-48

Matrix: Aqueous

Date Sampled: 04/04/2014 1120

Date Received: 04/04/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/08/2014 1438	RBH	04/07/2014 1247	44148

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		84	38-127
Phenol-d5		87	28-128
Terphenyl-d14		93	10-148

PQL = Practical quantitation limit

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E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 24 of 24

Level 1 Report v2.1



Shealy Environmental Services, Inc.  
106 Vantage Point Drive

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.sheddyab.com

Number 25879

[illegible]

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 14

Page 1 of 1  
Replaces Date: 09/26/13  
Effective Date: 03/07/14

## Sample Receipt Checklist (SRC)

Client: Wilmington Cooler Inspected by/date: EC 4/4/14 Lot #: PD6466

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.5 11.6</u> °C / <u>6</u> °C / / °C / / °C <u>+0.1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of >2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>EC</u> Verified by: <u>EC</u> Date: <u>4/4/14</u>		

Comments:



May 14, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 346376

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

346376

VENDOR: General Engineering Laboratories (GEL)Month: AprilYear: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C. 29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/4/14 09:50	1000	X	X	X		X	REC
WELL	#3A	4/8/14 09:22	1000	X	X	X		X	REC
WELL	#7	4/3/14 11:50	1000	X	X	X		X	REC
WELL	#10	4/3/14 14:26	1000	X	X	X		X	REC
WELL	#13R	4/3/14 11:26	1000	X	X	X		X	REC
WELL	#14	4/4/14 14:00	1000	X	X	X		X	REC
WELL	#15	4/4/14 12:22	1000	X	X	X		X	REC
WELL	#16	4/4/14 14:18	1000	X	X	X		X	REC
WELL	#17	4/8/14 11:30	1000	X	X	X		X	REC
WELL	#18	4/3/14 10:27	1000	X	X	X		X	REC
WELL	#20	4/8/14 10:05	1000	X	X	X		X	REC
WELL	#22	4/3/14 10:07	1000	X	X	X		X	REC
WELL	#23R	4/4/14 13:35	1000	X	X	X		X	REC
WELL	#24	4/4/14 08:49	1000	X	X	X		X	REC
WELL	#26	4/4/14 10:42	1000	X	X	X		X	REC
WELL	#27	4/8/14 09:42	1000	X	X	X		X	REC
WELL	#28	4/3/14 11:00	1000	X	X	X		X	REC
WELL	#29	4/3/14 09:30	1000	X	X	X		X	REC
WELL	#30	4/3/14 09:47	1000	X	X	X		X	REC
WELL	#32	4/3/14 14:50	1000	X	X	X		X	REC
WELL	#33	4/4/14 08:28	1000	X	X	X		X	REC
WELL	#38	4/3/14 09:06	1000	X	X	X		X	REC
WELL	#39	4/8/14 11:53	1000	X	X	X		X	REC
WELL	#41R	4/4/14 10:15	1000	X	X	X		X	REC
WELL	#43	4/8/14 12:10	1000	X	X	X		X	REC

Please email [crewsr@westinghouse.com](mailto:crewsr@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 4/9/14

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Electronically approved records are authenticated in the electronic document management system

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>346376</u>	
Received By: <u>Ricky Albee</u>		Date Received: <u>4/9/14</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags    Blue ice    Dry ice <u>alone</u> Other (describe) <u>22°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>To be filled/preserved in lab</u> If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			<u>RA 4/9/14</u>
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground    UPS    Field Services <u>Courier</u> Other <u>GEL</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

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### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 346376 GEL Work Order: 346376

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 346376001  
Matrix: Ground Water  
Collect Date: 04-APR-14 09:50  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.07	+/-23.2	35.8		pCi/L		MJH1	04/15/14	1410 1379234	1
Americium-241	U	0.904	+/-28.3	44.0		pCi/L					
Antimony-124	U	0.828	+/-10.1	19.9		pCi/L					
Antimony-125	U	-0.631	+/-10.2	18.6		pCi/L					
Barium-133	U	-3.18	+/-5.00	8.26		pCi/L					
Barium-140	U	11.3	+/-9.31	20.6		pCi/L					
Beryllium-7	U	-5.16	+/-35.5	64.1		pCi/L					
Bismuth-212	U	14.9	+/-65.1	114		pCi/L					
Bismuth-214	U	14.1	+/-12.3	18.4		pCi/L					
Cerium-139	U	1.06	+/-3.50	6.34		pCi/L					
Cerium-141	U	-2.81	+/-8.53	12.3		pCi/L					
Cerium-144	U	-7.7	+/-22.6	40.1		pCi/L					
Cesium-134	U	-1.28	+/-4.41	7.68		pCi/L					
Cesium-136	U	1.53	+/-9.71	18.4		pCi/L					
Cesium-137	U	1.97	+/-3.91	7.47	10.0	pCi/L					
Chromium-51	U	-13.9	+/-42.6	72.6		pCi/L					
Cobalt-56	U	2.61	+/-4.28	8.48		pCi/L					
Cobalt-57	U	1.02	+/-3.06	5.62		pCi/L					
Cobalt-58	U	-2.08	+/-4.04	6.84		pCi/L					
Cobalt-60	U	3.28	+/-4.09	8.58		pCi/L					
Europium-152	U	-7.44	+/-12.3	20.4		pCi/L					
Europium-154	U	-3.63	+/-12.7	22.6		pCi/L					
Europium-155	U	-8.4	+/-14.3	23.3		pCi/L					
Iridium-192	U	-4.48	+/-4.05	6.49		pCi/L					
Iron-59	U	-0.829	+/-7.52	14.1		pCi/L					
Lead-210	U	-39.8	+/-1030	1630		pCi/L					
Lead-212	U	12.3	+/-11.7	12.9		pCi/L					
Lead-214	U	-14.6	+/-11.2	15.4		pCi/L					
Manganese-54	U	4.66	+/-4.21	8.58		pCi/L					
Mercury-203	U	-4.38	+/-4.47	7.31		pCi/L					
Neodymium-147	U	-28.8	+/-46.5	80.2		pCi/L					
Neptunium-239	U	-10.3	+/-32.9	58.7		pCi/L					
Niobium-94	U	-4.3	+/-4.77	6.92		pCi/L					
Niobium-95	U	0.320	+/-3.98	7.26		pCi/L					
Potassium-40	UI	0.00	+/-63.9	56.4		pCi/L					
Promethium-144	U	1.87	+/-4.25	7.88		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 346376001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.98	+/-4.93	9.26	pCi/L
Radium-228	U	8.07	+/-23.2	35.8	pCi/L
Ruthenium-106	U	11.4	+/-35.7	66.6	pCi/L
Silver-110m	U	0.286	+/-3.19	5.92	pCi/L
Sodium-22	U	-1.21	+/-4.47	8.01	pCi/L
Thallium-208	U	5.89	+/-7.31	7.71	pCi/L
Thorium-230	U	-2030	+/-1820	2550	pCi/L
Thorium-234	U	82.0	+/-371	368	pCi/L
Tin-113	U	1.74	+/-4.83	9.12	pCi/L
Uranium-235	U	1.97	+/-30.2	44.3	pCi/L
Uranium-238	U	82.0	+/-371	368	pCi/L
Yttrium-88	U	-0.109	+/-4.99	9.60	pCi/L
Zinc-65	U	-4.01	+/-8.02	14.0	pCi/L
Zirconium-95	U	4.10	+/-7.39	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.66	+/-0.937	1.08	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	14.8	+/-1.75	2.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-0.663	+/-114	200	300	pCi/L	MYM1	04/21/14	0850	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	346376002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 09:22		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.08	+/-16.1	27.3		pCi/L		MJH1	04/15/14	1410 1379234	1
Americium-241	U	-23.5	+/-23.6	36.5		pCi/L					
Antimony-124	U	5.06	+/-9.85	20.0		pCi/L					
Antimony-125	U	5.09	+/-9.19	17.3		pCi/L					
Barium-133	U	-0.807	+/-4.67	7.37		pCi/L					
Barium-140	U	0.759	+/-4.88	9.93		pCi/L					
Beryllium-7	U	-8.04	+/-28.3	49.8		pCi/L					
Bismuth-212	U	-43.1	+/-66.2	93.8		pCi/L					
Bismuth-214	UI	0.00	+/-14.4	26.7		pCi/L					
Cerium-139	U	-2.21	+/-3.84	5.56		pCi/L					
Cerium-141	U	-3.63	+/-6.55	10.2		pCi/L					
Cerium-144	U	2.15	+/-20.4	36.2		pCi/L					
Cesium-134	U	-2.01	+/-3.71	5.54		pCi/L					
Cesium-136	U	3.79	+/-7.27	13.1		pCi/L					
Cesium-137	U	-0.757	+/-3.48	6.06	10.0	pCi/L					
Chromium-51	U	-23.1	+/-31.0	53.9		pCi/L					
Cobalt-56	U	-0.15	+/-3.76	6.91		pCi/L					
Cobalt-57	U	1.82	+/-2.59	4.77		pCi/L					
Cobalt-58	U	1.62	+/-3.52	6.83		pCi/L					
Cobalt-60	U	-0.571	+/-2.72	5.26		pCi/L					
Europium-152	U	3.50	+/-10.9	17.7		pCi/L					
Europium-154	U	1.26	+/-10.7	20.8		pCi/L					
Europium-155	U	-0.86	+/-11.2	19.9		pCi/L					
Iridium-192	U	1.53	+/-3.43	6.42		pCi/L					
Iron-59	U	-7.03	+/-7.21	11.6		pCi/L					
Lead-210	U	272	+/-756	1310		pCi/L					
Lead-212		11.8	+/-8.66	9.82		pCi/L					
Lead-214		71.0	+/-18.4	12.3		pCi/L					
Manganese-54	U	0.0322	+/-3.24	6.04		pCi/L					
Mercury-203	U	-5.31	+/-4.42	6.25		pCi/L					
Neodymium-147	U	-18.3	+/-33.5	57.1		pCi/L					
Neptunium-239	U	-11.8	+/-28.1	49.0		pCi/L					
Niobium-94	U	3.11	+/-3.18	6.41		pCi/L					
Niobium-95	UI	0.00	+/-4.35	5.99		pCi/L					
Potassium-40	U	-19.8	+/-50.7	81.0		pCi/L					
Promethium-144	U	-0.708	+/-3.65	5.90		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 346376002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.88	+/-4.26	7.94	pCi/L
Radium-228	U	1.08	+/-16.1	27.3	pCi/L
Ruthenium-106	U	-4.53	+/-29.4	51.7	pCi/L
Silver-110m	U	0.539	+/-3.27	5.93	pCi/L
Sodium-22	U	1.33	+/-3.65	7.34	pCi/L
Thallium-208		8.84	+/-5.24	4.35	pCi/L
Thorium-230	U	-1440	+/-1700	2420	pCi/L
Thorium-234	U	161	+/-361	400	pCi/L
Tin-113	U	3.59	+/-5.14	7.43	pCi/L
Uranium-235	U	-8.13	+/-25.4	40.1	pCi/L
Uranium-238	U	161	+/-361	400	pCi/L
Yttrium-88	U	-2.25	+/-4.85	8.48	pCi/L
Zinc-65	U	8.11	+/-8.36	15.5	pCi/L
Zirconium-95	U	-0.973	+/-5.74	10.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.32	+/-0.791	1.00	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	0.896	+/-1.42	2.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	7.35	+/-116	203	300	pCi/L	MYM1	04/21/14	0907	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	346376003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 11:50		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.3	+/-17.1	29.7		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	5.02	+/-15.6	25.8		pCi/L					
Antimony-124	U	-6.92	+/-11.6	16.1		pCi/L					
Antimony-125	U	-4.24	+/-11.0	16.4		pCi/L					
Barium-133	U	-2.87	+/-4.86	7.20		pCi/L					
Barium-140	U	-6.15	+/-8.03	13.4		pCi/L					
Beryllium-7	U	-16.1	+/-32.2	51.3		pCi/L					
Bismuth-212	U	26.0	+/-50.6	87.3		pCi/L					
Bismuth-214	U	2.41	+/-13.4	12.3		pCi/L					
Cerium-139	U	-1.09	+/-3.25	4.84		pCi/L					
Cerium-141	U	-3.19	+/-5.66	9.49		pCi/L					
Cerium-144	U	2.38	+/-19.1	33.4		pCi/L					
Cesium-134	U	-0.196	+/-3.25	6.02		pCi/L					
Cesium-136	U	-2.54	+/-8.03	14.1		pCi/L					
Cesium-137	U	1.89	+/-4.88	8.27	10.0	pCi/L					
Chromium-51	U	7.80	+/-32.8	60.1		pCi/L					
Cobalt-56	U	-5.42	+/-3.75	5.79		pCi/L					
Cobalt-57	U	-0.592	+/-2.47	4.26		pCi/L					
Cobalt-58	U	0.0411	+/-3.35	6.22		pCi/L					
Cobalt-60	U	-1.42	+/-3.15	5.69		pCi/L					
Europium-152	U	5.32	+/-9.06	17.0		pCi/L					
Europium-154	U	-1.95	+/-9.57	17.8		pCi/L					
Europium-155	U	4.51	+/-10.4	18.7		pCi/L					
Iridium-192	U	-1.83	+/-3.41	5.93		pCi/L					
Iron-59	U	2.96	+/-8.14	13.8		pCi/L					
Lead-210	U	425	+/-605	575		pCi/L					
Lead-212	U	3.68	+/-9.66	12.5		pCi/L					
Lead-214	U	9.06	+/-10.3	13.6		pCi/L					
Manganese-54	U	2.96	+/-3.38	6.73		pCi/L					
Mercury-203	U	-2.44	+/-5.00	7.13		pCi/L					
Neodymium-147	U	-3.01	+/-39.8	70.7		pCi/L					
Neptunium-239	U	3.53	+/-25.6	45.1		pCi/L					
Niobium-94	U	-0.122	+/-3.39	6.20		pCi/L					
Niobium-95	U	0.0189	+/-3.58	6.61		pCi/L					
Potassium-40	U	-42.3	+/-49.3	81.0		pCi/L					
Promethium-144	U	-0.525	+/-3.53	6.38		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	346376003	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.45	+/-4.03	7.41	pCi/L
Radium-228	U	17.3	+/-17.1	29.7	pCi/L
Ruthenium-106	U	7.28	+/-31.5	52.9	pCi/L
Silver-110m	U	-4.17	+/-3.50	5.79	pCi/L
Sodium-22	U	-0.578	+/-3.39	6.34	pCi/L
Thallium-208	U	3.56	+/-5.67	6.27	pCi/L
Thorium-230	U	41.2	+/-1190	1770	pCi/L
Thorium-234	U	86.8	+/-204	255	pCi/L
Tin-113	U	0.779	+/-4.13	7.52	pCi/L
Uranium-235	U	-16	+/-22.1	34.2	pCi/L
Uranium-238	U	86.8	+/-204	255	pCi/L
Yttrium-88	U	-5.12	+/-3.89	5.34	pCi/L
Zinc-65	U	-0.826	+/-6.55	11.9	pCi/L
Zirconium-95	U	-0.466	+/-6.29	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		5.23	+/-1.93	2.31	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		127	+/-3.68	2.83	5.00	pCi/L					
Alpha	U	3.85	+/-3.26	4.88	5.00	pCi/L	DXG3	05/06/14	1208	1382543	3
Beta		120	+/-6.38	3.65	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99		299	+/-109	169	300	pCi/L	MYM1	04/29/14	0915	1382434	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	346376003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	346376004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 14:26		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-30.3	+/-18.9	24.5		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	18.2	+/-33.0	53.7		pCi/L					
Antimony-124	U	-2.8	+/-8.75	16.1		pCi/L					
Antimony-125	U	2.09	+/-9.61	17.8		pCi/L					
Barium-133	U	-3.46	+/-5.17	7.64		pCi/L					
Barium-140	U	-3.9	+/-8.47	15.0		pCi/L					
Beryllium-7	U	-0.243	+/-36.5	66.1		pCi/L					
Bismuth-212	U	25.2	+/-52.8	100		pCi/L					
Bismuth-214	U	-5.03	+/-10.9	16.1		pCi/L					
Cerium-139	U	-0.236	+/-3.42	5.90		pCi/L					
Cerium-141	U	-1.07	+/-6.85	11.8		pCi/L					
Cerium-144	U	-6.03	+/-24.0	39.9		pCi/L					
Cesium-134	U	0.426	+/-4.10	7.54		pCi/L					
Cesium-136	U	0.974	+/-9.22	17.6		pCi/L					
Cesium-137	U	-0.227	+/-4.04	7.29	10.0	pCi/L					
Chromium-51	U	0.799	+/-40.3	73.3		pCi/L					
Cobalt-56	U	1.08	+/-4.27	7.91		pCi/L					
Cobalt-57	U	1.10	+/-3.09	5.51		pCi/L					
Cobalt-58	U	-2.73	+/-4.69	6.66		pCi/L					
Cobalt-60	U	1.69	+/-4.66	9.08		pCi/L					
Europium-152	U	0.413	+/-12.9	20.4		pCi/L					
Europium-154	U	-7.16	+/-12.1	17.5		pCi/L					
Europium-155	U	3.84	+/-13.8	24.5		pCi/L					
Iridium-192	U	-0.585	+/-3.90	7.03		pCi/L					
Iron-59	U	-0.972	+/-8.62	16.1		pCi/L					
Lead-210	U	320	+/-1840	1250		pCi/L					
Lead-212	U	1.32	+/-10.2	12.1		pCi/L					
Lead-214	U	12.1	+/-12.6	17.5		pCi/L					
Manganese-54	U	1.63	+/-3.91	7.35		pCi/L					
Mercury-203	U	4.05	+/-4.36	7.92		pCi/L					
Neodymium-147	U	19.6	+/-51.9	97.1		pCi/L					
Neptunium-239	U	-27	+/-34.6	58.1		pCi/L					
Niobium-94	U	-2.28	+/-3.50	5.92		pCi/L					
Niobium-95	U	1.17	+/-4.02	7.50		pCi/L					
Potassium-40	U	39.8	+/-49.8	100		pCi/L					
Promethium-144	U	0.222	+/-4.00	7.22		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10  
Sample ID: 346376004

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.204	+/-4.84	8.75	pCi/L
Radium-228	U	-30.3	+/-18.9	24.5	pCi/L
Ruthenium-106	U	31.3	+/-33.3	65.7	pCi/L
Silver-110m	U	-0.223	+/-3.54	6.42	pCi/L
Sodium-22	U	-2.4	+/-4.28	6.23	pCi/L
Thallium-208	U	2.89	+/-5.56	8.42	pCi/L
Thorium-230	UI	0.00	+/-2840	3240	pCi/L
Thorium-234	U	147	+/-347	433	pCi/L
Tin-113	U	0.897	+/-4.63	8.57	pCi/L
Uranium-235	U	22.7	+/-27.9	43.6	pCi/L
Uranium-238	U	147	+/-347	433	pCi/L
Yttrium-88	U	-1.01	+/-4.90	9.04	pCi/L
Zinc-65	U	1.07	+/-8.74	16.6	pCi/L
Zirconium-95	U	3.63	+/-6.88	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.26	+/-1.95	2.73	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		66.7	+/-2.52	1.74	5.00	pCi/L					
Alpha	U	1.74	+/-2.75	4.83	5.00	pCi/L	DXG3	05/06/14	1208	1382543	3
Beta		66.7	+/-4.83	3.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	109	+/-120	201	300	pCi/L	MYM1	04/21/14	0940	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 10  
Sample ID: 346376004

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 346376005  
Matrix: Ground Water  
Collect Date: 03-APR-14 11:26  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.65	+/-26.6	38.5		pCi/L		MJH1	04/15/14	1411 1379234	1
Americium-241	U	-1.47	+/-6.56	9.87		pCi/L					
Antimony-124	U	4.35	+/-12.0	24.1		pCi/L					
Antimony-125	U	5.91	+/-11.1	21.0		pCi/L					
Barium-133	U	0.311	+/-5.04	8.22		pCi/L					
Barium-140	U	-1.93	+/-10.5	17.0		pCi/L					
Beryllium-7	U	66.8	+/-131	68.7		pCi/L					
Bismuth-212	U	49.5	+/-62.1	125		pCi/L					
Bismuth-214	U	16.9	+/-19.5	21.2		pCi/L					
Cerium-139	U	-0.257	+/-2.86	5.02		pCi/L					
Cerium-141	U	-4.85	+/-6.17	9.43		pCi/L					
Cerium-144	U	8.50	+/-17.7	32.4		pCi/L					
Cesium-134	U	2.87	+/-4.91	9.56		pCi/L					
Cesium-136	U	-6.76	+/-10.4	17.7		pCi/L					
Cesium-137	U	-1.23	+/-4.57	7.93	10.0	pCi/L					
Chromium-51	U	17.9	+/-37.8	71.6		pCi/L					
Cobalt-56	U	-1.77	+/-4.70	8.43		pCi/L					
Cobalt-57	U	-0.655	+/-2.09	3.69		pCi/L					
Cobalt-58	U	7.18	+/-18.5	8.07		pCi/L					
Cobalt-60	U	-0.312	+/-5.13	8.55		pCi/L					
Europium-152	U	0.536	+/-10.4	19.2		pCi/L					
Europium-154	U	2.09	+/-12.9	24.8		pCi/L					
Europium-155	U	-0.559	+/-10.0	15.8		pCi/L					
Iridium-192	U	1.91	+/-3.67	6.99		pCi/L					
Iron-59	U	2.21	+/-9.99	19.1		pCi/L					
Lead-210	U	-45	+/-92.7	145		pCi/L					
Lead-212	U	3.20	+/-9.56	10.9		pCi/L					
Lead-214	U	15.8	+/-13.3	17.9		pCi/L					
Manganese-54	U	1.83	+/-4.23	8.31		pCi/L					
Mercury-203	U	0.133	+/-3.83	6.63		pCi/L					
Neodymium-147	U	44.8	+/-51.6	102		pCi/L					
Neptunium-239	U	13.6	+/-22.6	41.9		pCi/L					
Niobium-94	U	-0.531	+/-4.46	7.79		pCi/L					
Niobium-95	U	-0.226	+/-4.40	8.26		pCi/L					
Potassium-40	U	-21.9	+/-60.1	102		pCi/L					
Promethium-144	U	-1.13	+/-4.86	8.36		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 346376005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.20	+/-4.59	8.75	pCi/L
Radium-228	U	7.65	+/-26.6	38.5	pCi/L
Ruthenium-106	U	-12.6	+/-42.5	73.5	pCi/L
Silver-110m	U	3.22	+/-3.97	7.79	pCi/L
Sodium-22	U	0.196	+/-4.60	8.67	pCi/L
Thallium-208	U	-5.3	+/-5.80	9.02	pCi/L
Thorium-230	U	806	+/-740	962	pCi/L
Thorium-234	U	40.8	+/-112	142	pCi/L
Tin-113	U	-2.22	+/-5.28	9.30	pCi/L
Uranium-235	U	0.748	+/-20.9	33.8	pCi/L
Uranium-238	U	40.8	+/-112	142	pCi/L
Yttrium-88	U	-4.07	+/-5.89	9.90	pCi/L
Zinc-65	U	-9.53	+/-10.2	16.5	pCi/L
Zirconium-95	U	1.71	+/-8.24	15.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.16	+/-0.946	1.46	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		120	+/-3.30	1.92	5.00	pCi/L					
Alpha	U	1.15	+/-2.53	4.64	5.00	pCi/L	DXG3	05/06/14	1208	1382543	3
Beta		110	+/-5.96	3.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	191	+/-123	200	300	pCi/L	MYM1	04/21/14	0956	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R  
Sample ID: 346376005

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	346376006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 14:00		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.4	+/-16.9	29.4		pCi/L		MJH1	04/15/14	1412 1379234	1
Americium-241	U	5.13	+/-11.4	18.7		pCi/L					
Antimony-124	U	1.39	+/-6.59	13.4		pCi/L					
Antimony-125	U	-5.95	+/-7.85	13.5		pCi/L					
Barium-133	U	-2.76	+/-4.91	7.40		pCi/L					
Barium-140	U	-10.3	+/-8.52	9.70		pCi/L					
Beryllium-7	U	-13.1	+/-30.9	54.1		pCi/L					
Bismuth-212	U	32.3	+/-64.1	78.6		pCi/L					
Bismuth-214		20.7	+/-10.2	11.5		pCi/L					
Cerium-139	U	1.09	+/-2.93	5.21		pCi/L					
Cerium-141	U	0.312	+/-6.07	9.88		pCi/L					
Cerium-144	U	-3.54	+/-20.7	33.6		pCi/L					
Cesium-134	U	0.692	+/-3.58	6.56		pCi/L					
Cesium-136	U	-2.13	+/-6.78	12.3		pCi/L					
Cesium-137	U	-2.27	+/-3.75	6.09	10.0	pCi/L					
Chromium-51	U	15.7	+/-35.8	63.2		pCi/L					
Cobalt-56	U	-1.95	+/-3.54	5.99		pCi/L					
Cobalt-57	U	0.106	+/-2.42	4.28		pCi/L					
Cobalt-58	U	5.33	+/-3.23	5.61		pCi/L					
Cobalt-60	U	1.74	+/-4.43	6.46		pCi/L					
Europium-152	U	-3.08	+/-9.40	15.8		pCi/L					
Europium-154	U	-6.91	+/-8.00	13.3		pCi/L					
Europium-155	U	1.85	+/-11.4	18.4		pCi/L					
Iridium-192	U	1.38	+/-3.56	6.28		pCi/L					
Iron-59	U	-3.16	+/-6.87	12.2		pCi/L					
Lead-210	U	-256	+/-255	362		pCi/L					
Lead-212	U	4.14	+/-7.93	12.0		pCi/L					
Lead-214	U	4.04	+/-12.7	12.8		pCi/L					
Manganese-54	U	-1.59	+/-3.86	5.60		pCi/L					
Mercury-203	U	1.78	+/-3.48	6.21		pCi/L					
Neodymium-147	U	-24.8	+/-40.8	70.3		pCi/L					
Neptunium-239	U	-6.43	+/-26.0	45.4		pCi/L					
Niobium-94	U	-0.0614	+/-3.25	5.80		pCi/L					
Niobium-95	U	0.353	+/-3.64	6.57		pCi/L					
Potassium-40	U	-17.7	+/-53.1	81.4		pCi/L					
Promethium-144	U	1.27	+/-3.36	6.19		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 14  
Sample ID: 346376006  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.330	+/-3.81	6.98	pCi/L
Radium-228	U	19.4	+/-16.9	29.4	pCi/L
Ruthenium-106	U	23.0	+/-28.9	55.6	pCi/L
Silver-110m	U	-0.228	+/-3.00	5.39	pCi/L
Sodium-22	U	-2.43	+/-2.82	4.68	pCi/L
Thallium-208	U	-0.412	+/-4.18	6.79	pCi/L
Thorium-230	U	306	+/-1040	1420	pCi/L
Thorium-234	U	86.0	+/-166	207	pCi/L
Tin-113	U	-1.53	+/-3.93	6.98	pCi/L
Uranium-235	U	-28.2	+/-24.5	33.1	pCi/L
Uranium-238	U	86.0	+/-166	207	pCi/L
Yttrium-88	U	0.363	+/-3.11	6.38	pCi/L
Zinc-65	U	7.50	+/-5.84	12.1	pCi/L
Zirconium-95	U	0.855	+/-6.16	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.20	+/-0.835	0.781	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	9.21	+/-1.18	1.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	58.6	+/-120	205	300	pCi/L	MYM1	04/21/14	1013	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	346376007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 12:22		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-19.3	+/-16.8	24.6		pCi/L		MJH1	04/15/14	1412 1379234	1
Americium-241	U	2.01	+/-11.0	17.7		pCi/L					
Antimony-124	U	2.67	+/-7.94	15.8		pCi/L					
Antimony-125	U	5.30	+/-8.79	16.1		pCi/L					
Barium-133	U	4.18	+/-4.03	6.93		pCi/L					
Barium-140	U	-1.99	+/-6.63	11.9		pCi/L					
Beryllium-7	U	9.25	+/-28.2	50.9		pCi/L					
Bismuth-212	U	31.4	+/-44.9	86.3		pCi/L					
Bismuth-214		18.4	+/-13.0	12.0		pCi/L					
Cerium-139	U	-0.869	+/-2.83	4.73		pCi/L					
Cerium-141	U	0.934	+/-5.52	9.09		pCi/L					
Cerium-144	U	8.18	+/-18.2	32.0		pCi/L					
Cesium-134	U	2.12	+/-3.33	5.85		pCi/L					
Cesium-136	U	-12.2	+/-9.78	11.3		pCi/L					
Cesium-137	U	-0.601	+/-3.57	5.59	10.0	pCi/L					
Chromium-51	U	-2.23	+/-32.4	53.3		pCi/L					
Cobalt-56	U	0.452	+/-3.11	5.76		pCi/L					
Cobalt-57	U	0.872	+/-2.31	4.07		pCi/L					
Cobalt-58	U	0.607	+/-3.34	6.17		pCi/L					
Cobalt-60	U	-1.46	+/-3.60	6.39		pCi/L					
Europium-152	U	-2.12	+/-9.38	16.4		pCi/L					
Europium-154	U	-3.24	+/-9.21	16.6		pCi/L					
Europium-155	U	0.359	+/-9.45	16.4		pCi/L					
Iridium-192	U	0.523	+/-3.30	5.92		pCi/L					
Iron-59	U	-1.98	+/-6.55	12.0		pCi/L					
Lead-210	U	9.39	+/-239	383		pCi/L					
Lead-212	U	6.81	+/-10.9	11.2		pCi/L					
Lead-214	UI	0.00	+/-11.0	17.0		pCi/L					
Manganese-54	U	0.449	+/-3.20	5.86		pCi/L					
Mercury-203	U	-0.721	+/-3.51	6.20		pCi/L					
Neodymium-147	U	-4.45	+/-45.0	67.9		pCi/L					
Neptunium-239	U	7.39	+/-24.1	42.3		pCi/L					
Niobium-94	U	1.43	+/-3.08	5.79		pCi/L					
Niobium-95	U	-0.165	+/-3.17	5.76		pCi/L					
Potassium-40	U	25.6	+/-51.1	61.4		pCi/L					
Promethium-144	U	-0.926	+/-3.20	5.68		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	346376007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.85	+/-4.11	6.84	pCi/L
Radium-228	U	-19.3	+/-16.8	24.6	pCi/L
Ruthenium-106	U	0.363	+/-28.5	52.2	pCi/L
Silver-110m	U	3.51	+/-3.56	5.56	pCi/L
Sodium-22	U	-1.84	+/-3.32	5.83	pCi/L
Thallium-208	U	-2.53	+/-4.13	6.54	pCi/L
Thorium-230	U	-243	+/-825	1370	pCi/L
Thorium-234	U	72.1	+/-143	209	pCi/L
Tin-113	U	3.44	+/-4.39	8.10	pCi/L
Uranium-235	U	3.24	+/-23.2	32.7	pCi/L
Uranium-238	U	72.1	+/-143	209	pCi/L
Yttrium-88	U	1.78	+/-3.29	7.04	pCi/L
Zinc-65	U	-0.355	+/-7.15	13.3	pCi/L
Zirconium-95	U	-1.56	+/-6.04	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.14	+/-0.832	1.06	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	191	+/-3.92	1.42	5.00	pCi/L					
Alpha	U 0.945	+/-1.65	2.96	5.00	pCi/L	DXG3	05/06/14	1207	1382543	3
Beta	167	+/-7.90	4.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	379	+/-131	201	300	pCi/L	MYM1	04/21/14	1029	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 15  
Sample ID: 346376007

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	346376008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 14:18		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-2.17	+/-13.8	25.4		pCi/L		MJH1	04/15/14	1413	1379234	1
Americium-241	U	-9.03	+/-20.1	34.0		pCi/L						
Antimony-124	U	1.77	+/-7.40	15.2		pCi/L						
Antimony-125	U	7.88	+/-9.00	17.4		pCi/L						
Barium-133	U	-1.42	+/-4.65	6.88		pCi/L						
Barium-140	U	-4.29	+/-7.98	11.7		pCi/L						
Beryllium-7	U	4.24	+/-29.6	54.7		pCi/L						
Bismuth-212	U	-30.7	+/-56.2	75.4		pCi/L						
Bismuth-214		12.9	+/-10.9	12.6		pCi/L						
Cerium-139	U	0.819	+/-2.95	5.34		pCi/L						
Cerium-141	U	-6.6	+/-7.99	10.8		pCi/L						
Cerium-144	U	10.4	+/-19.9	36.7		pCi/L						
Cesium-134	U	0.705	+/-3.51	5.97		pCi/L						
Cesium-136	U	-0.545	+/-7.51	13.9		pCi/L						
Cesium-137	U	0.899	+/-6.13	5.80	10.0	pCi/L						
Chromium-51	U	8.24	+/-34.9	61.9		pCi/L						
Cobalt-56	U	-0.381	+/-3.67	6.50		pCi/L						
Cobalt-57	U	0.478	+/-2.54	4.34		pCi/L						
Cobalt-58	U	1.64	+/-3.72	6.94		pCi/L						
Cobalt-60	U	-0.105	+/-3.49	6.50		pCi/L						
Europium-152	U	0.634	+/-9.61	16.4		pCi/L						
Europium-154	U	5.89	+/-9.51	19.3		pCi/L						
Europium-155	U	-0.672	+/-10.6	17.9		pCi/L						
Iridium-192	U	-3.29	+/-3.52	5.76		pCi/L						
Iron-59	U	-1.28	+/-7.12	13.0		pCi/L						
Lead-210	U	70.5	+/-784	1190		pCi/L						
Lead-212	U	1.81	+/-10.7	12.1		pCi/L						
Lead-214	UI	0.00	+/-15.4	16.9		pCi/L						
Manganese-54	U	-2.63	+/-3.78	5.76		pCi/L						
Mercury-203	U	4.13	+/-3.93	6.62		pCi/L						
Neodymium-147	U	9.27	+/-41.9	77.7		pCi/L						
Neptunium-239	U	5.66	+/-27.6	47.3		pCi/L						
Niobium-94	U	-0.924	+/-3.38	5.92		pCi/L						
Niobium-95	U	-1.03	+/-3.52	6.16		pCi/L						
Potassium-40	U	5.52	+/-52.0	69.6		pCi/L						
Promethium-144	U	3.02	+/-3.66	6.95		pCi/L						

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16 Project: WNUC00127  
Sample ID: 346376008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.200	+/-4.10	7.54	pCi/L
Radium-228	U	-2.17	+/-13.8	25.4	pCi/L
Ruthenium-106	U	-20	+/-31.2	53.3	pCi/L
Silver-110m	U	2.77	+/-3.64	6.26	pCi/L
Sodium-22	U	1.73	+/-3.38	6.74	pCi/L
Thallium-208	U	-2.48	+/-3.90	6.21	pCi/L
Thorium-230	U	947	+/-1360	2420	pCi/L
Thorium-234	U	-164	+/-209	331	pCi/L
Tin-113	U	-2.84	+/-4.51	7.47	pCi/L
Uranium-235	U	3.71	+/-29.8	36.0	pCi/L
Uranium-238	U	-164	+/-209	331	pCi/L
Yttrium-88	U	1.03	+/-3.79	7.69	pCi/L
Zinc-65	U	-5.64	+/-7.89	11.1	pCi/L
Zirconium-95	U	4.25	+/-6.78	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	2.25	+/-0.972	1.39	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	18.3	+/-1.52	1.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	30.7	+/-115	198	300	pCi/L	MYM1	04/21/14	1046	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	346376009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 11:30		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.24	+/-15.1	27.4		pCi/L		MJH1	04/15/14	1413 1379234	1
Americium-241	U	6.38	+/-18.8	29.8		pCi/L					
Antimony-124	U	0.355	+/-7.62	14.9		pCi/L					
Antimony-125	U	8.35	+/-9.19	17.3		pCi/L					
Barium-133	U	-1.98	+/-4.74	7.15		pCi/L					
Barium-140	U	5.34	+/-5.32	10.6		pCi/L					
Beryllium-7	U	17.2	+/-29.0	53.5		pCi/L					
Bismuth-212	U	-29.8	+/-54.1	78.6		pCi/L					
Bismuth-214		41.7	+/-13.5	11.3		pCi/L					
Cerium-139	U	-0.919	+/-3.09	5.11		pCi/L					
Cerium-141	U	0.980	+/-6.57	9.94		pCi/L					
Cerium-144	U	-6.87	+/-24.1	35.6		pCi/L					
Cesium-134	U	2.06	+/-3.43	6.70		pCi/L					
Cesium-136	U	2.74	+/-5.44	10.7		pCi/L					
Cesium-137	U	1.73	+/-5.03	6.16	10.0	pCi/L					
Chromium-51	U	-30.2	+/-35.0	55.4		pCi/L					
Cobalt-56	U	2.93	+/-2.97	5.61		pCi/L					
Cobalt-57	U	-0.968	+/-2.64	4.41		pCi/L					
Cobalt-58	U	-3.02	+/-3.48	4.94		pCi/L					
Cobalt-60	U	-5.86	+/-3.87	5.80		pCi/L					
Europium-152	U	7.65	+/-9.42	17.6		pCi/L					
Europium-154	U	-4.11	+/-11.0	19.3		pCi/L					
Europium-155	U	-3.85	+/-11.1	18.7		pCi/L					
Iridium-192	U	2.33	+/-3.56	6.54		pCi/L					
Iron-59	U	-1.96	+/-7.15	11.0		pCi/L					
Lead-210	U	9.16	+/-625	769		pCi/L					
Lead-212	U	8.03	+/-8.88	9.83		pCi/L					
Lead-214		72.5	+/-15.0	12.1		pCi/L					
Manganese-54	U	-1.15	+/-3.06	5.48		pCi/L					
Mercury-203	U	1.45	+/-3.54	6.45		pCi/L					
Neodymium-147	U	15.7	+/-32.2	59.3		pCi/L					
Neptunium-239	U	11.7	+/-28.8	49.9		pCi/L					
Niobium-94	U	4.11	+/-5.32	5.40		pCi/L					
Niobium-95	U	0.206	+/-3.32	6.17		pCi/L					
Potassium-40	U	33.1	+/-53.3	60.0		pCi/L					
Promethium-144	U	3.75	+/-3.62	6.14		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17 Project: WNUC00127  
Sample ID: 346376009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.119	+/-4.26	7.53	pCi/L
Radium-228	U	6.24	+/-15.1	27.4	pCi/L
Ruthenium-106	U	-8.43	+/-29.3	50.4	pCi/L
Silver-110m	U	-0.355	+/-3.44	5.23	pCi/L
Sodium-22	U	-1.35	+/-3.88	6.81	pCi/L
Thallium-208	U	2.37	+/-4.57	7.16	pCi/L
Thorium-230	U	203	+/-1340	2090	pCi/L
Thorium-234	U	163	+/-241	254	pCi/L
Tin-113	U	-1.52	+/-4.26	7.40	pCi/L
Uranium-235	U	-1.37	+/-27.4	39.2	pCi/L
Uranium-238	U	163	+/-241	254	pCi/L
Yttrium-88	U	-1.42	+/-3.84	5.91	pCi/L
Zinc-65	U	7.45	+/-7.30	11.0	pCi/L
Zirconium-95	U	-0.696	+/-5.81	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.296	+/-0.798	1.38	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta		486	+/-6.21	1.94	5.00	pCi/L					
Alpha	U	1.19	+/-2.38	4.24	5.00	pCi/L	DXG3	05/06/14	1207	1382543	3
Beta		455	+/-12.7	4.07	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	858	+/-148	200	300	pCi/L	MYM1	04/21/14	1102	1379900	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17  
Sample ID: 346376009

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 346376010  
Matrix: Ground Water  
Collect Date: 03-APR-14 10:27  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Uranium-233/234		7.65	+/-1.05	0.263	1.00	pCi/L		HAKB	05/12/14	1650	1386260	1
Uranium-235/236		0.277	+/-0.244	0.138	1.00	pCi/L						
Uranium-238		3.30	+/-0.696	0.219	1.00	pCi/L						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	5.05	+/-20.8	27.1		pCi/L		MJH1	04/15/14	1413	1379234	2
Americium-241	U	-4.08	+/-15.2	22.8		pCi/L						
Antimony-124	U	8.48	+/-8.75	18.9		pCi/L						
Antimony-125	U	-0.527	+/-9.00	15.7		pCi/L						
Barium-133	U	-1.64	+/-4.29	6.34		pCi/L						
Barium-140	U	2.71	+/-7.55	15.0		pCi/L						
Beryllium-7	U	-19.1	+/-29.9	49.2		pCi/L						
Bismuth-212	U	-22.5	+/-40.6	70.5		pCi/L						
Bismuth-214	U	3.11	+/-11.2	12.4		pCi/L						
Cerium-139	U	-1.12	+/-2.74	4.80		pCi/L						
Cerium-141	U	0.656	+/-5.60	10.1		pCi/L						
Cerium-144	U	-5.48	+/-19.0	33.7		pCi/L						
Cesium-134	U	-0.521	+/-3.00	5.45		pCi/L						
Cesium-136	U	0.838	+/-8.13	14.9		pCi/L						
Cesium-137	U	2.51	+/-6.52	5.74	10.0	pCi/L						
Chromium-51	U	0.821	+/-34.5	60.7		pCi/L						
Cobalt-56	U	-3.01	+/-3.58	5.94		pCi/L						
Cobalt-57	U	-1.76	+/-2.29	3.98		pCi/L						
Cobalt-58	U	-1.85	+/-3.24	5.58		pCi/L						
Cobalt-60	U	-0.548	+/-4.72	7.19		pCi/L						
Europium-152	U	12.3	+/-10.7	17.1		pCi/L						
Europium-154	U	-1.4	+/-9.40	17.6		pCi/L						
Europium-155	U	4.54	+/-10.0	17.3		pCi/L						
Iridium-192	U	-3.02	+/-3.40	5.63		pCi/L						
Iron-59	U	-2.46	+/-7.56	13.1		pCi/L						
Lead-210	U	-251	+/-338	505		pCi/L						
Lead-212	U	4.73	+/-7.99	11.0		pCi/L						
Lead-214	U	2.92	+/-10.1	14.3		pCi/L						
Manganese-54	U	-0.379	+/-2.97	5.37		pCi/L						
Mercury-203	U	-1.47	+/-4.21	6.31		pCi/L						
Neodymium-147	U	13.4	+/-39.8	75.8		pCi/L						

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 346376010

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	15.7	+/-26.0	45.2	pCi/L
Niobium-94	U	0.993	+/-3.06	5.74	pCi/L
Niobium-95	U	1.08	+/-3.33	6.29	pCi/L
Potassium-40	UI	0.00	+/-55.8	52.9	pCi/L
Promethium-144	U	-0.778	+/-3.03	5.41	pCi/L
Promethium-146	U	-1.48	+/-3.95	6.68	pCi/L
Radium-228	U	5.05	+/-20.8	27.1	pCi/L
Ruthenium-106	U	-2.16	+/-26.4	48.4	pCi/L
Silver-110m	U	0.0682	+/-3.52	5.62	pCi/L
Sodium-22	U	-0.543	+/-3.31	6.18	pCi/L
Thallium-208	U	-0.36	+/-4.23	7.21	pCi/L
Thorium-230	U	165	+/-1520	1630	pCi/L
Thorium-234	U	16.0	+/-176	188	pCi/L
Tin-113	U	0.0598	+/-4.28	7.50	pCi/L
Uranium-235	U	-3.69	+/-22.0	34.7	pCi/L
Uranium-238	U	16.0	+/-176	188	pCi/L
Yttrium-88	U	1.25	+/-3.49	6.54	pCi/L
Zinc-65	U	8.10	+/-5.58	11.9	pCi/L
Zirconium-95	U	-0.584	+/-6.54	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	23.5	+/-5.78	5.92	5.00	pCi/L	DXG3	05/05/14	1746	1382543	3
Beta	175	+/-6.78	3.51	5.00	pCi/L					
Alpha	17.9	+/-6.28	7.19	5.00	pCi/L	DXG3	05/06/14	1201	1382543	4
Beta	169	+/-6.56	4.17	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	299	+/-129	203	300	pCi/L	MYM1	04/21/14	1119	1379900	5
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# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	346376010	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			95.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	346376011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 10:05		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.3	+/-22.5	35.9		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-7.13	+/-14.3	21.8		pCi/L					
Antimony-124	U	-2.53	+/-8.57	16.4		pCi/L					
Antimony-125	U	3.76	+/-10.5	18.9		pCi/L					
Barium-133	U	-3.02	+/-5.45	7.92		pCi/L					
Barium-140	U	0.758	+/-6.74	13.6		pCi/L					
Beryllium-7	U	-1.36	+/-33.3	61.2		pCi/L					
Bismuth-212	U	23.5	+/-49.0	95.2		pCi/L					
Bismuth-214	UI	0.00	+/-16.3	22.2		pCi/L					
Cerium-139	U	1.46	+/-2.92	5.39		pCi/L					
Cerium-141	U	4.88	+/-5.17	9.24		pCi/L					
Cerium-144	U	-0.789	+/-20.6	34.9		pCi/L					
Cesium-134	U	-1.0	+/-4.72	8.37		pCi/L					
Cesium-136	U	-4.95	+/-6.99	12.1		pCi/L					
Cesium-137	U	0.907	+/-6.91	8.31	10.0	pCi/L					
Chromium-51	U	-4.84	+/-43.7	62.7		pCi/L					
Cobalt-56	U	2.10	+/-4.12	7.93		pCi/L					
Cobalt-57	U	1.65	+/-2.63	4.62		pCi/L					
Cobalt-58	U	0.743	+/-4.01	7.47		pCi/L					
Cobalt-60	U	1.07	+/-4.31	8.48		pCi/L					
Europium-152	U	-0.22	+/-10.4	18.3		pCi/L					
Europium-154	U	-2.37	+/-10.8	20.1		pCi/L					
Europium-155	U	-0.955	+/-9.86	16.9		pCi/L					
Iridium-192	U	-1.55	+/-3.70	6.35		pCi/L					
Iron-59	U	7.95	+/-7.45	15.2		pCi/L					
Lead-210	U	62.1	+/-360	523		pCi/L					
Lead-212	U	2.38	+/-9.77	11.0		pCi/L					
Lead-214		22.4	+/-17.6	14.4		pCi/L					
Manganese-54	U	2.09	+/-4.00	7.67		pCi/L					
Mercury-203	U	-1.19	+/-4.21	6.40		pCi/L					
Neodymium-147	U	-23.5	+/-37.0	64.6		pCi/L					
Neptunium-239	U	28.2	+/-29.3	45.2		pCi/L					
Niobium-94	U	-1.42	+/-4.41	6.63		pCi/L					
Niobium-95	U	2.89	+/-3.97	7.80		pCi/L					
Potassium-40	U	-25.3	+/-62.7	104		pCi/L					
Promethium-144	U	1.35	+/-4.53	7.40		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 346376011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.80	+/-4.61	8.69	pCi/L
Radium-228	U	10.3	+/-22.5	35.9	pCi/L
Ruthenium-106	U	12.3	+/-34.3	65.0	pCi/L
Silver-110m	U	1.56	+/-4.09	7.52	pCi/L
Sodium-22	U	-0.905	+/-3.78	7.00	pCi/L
Thallium-208	U	3.03	+/-9.74	6.96	pCi/L
Thorium-230	U	-128	+/-994	1640	pCi/L
Thorium-234	U	26.0	+/-177	190	pCi/L
Tin-113	U	1.80	+/-4.14	7.64	pCi/L
Uranium-235	U	-27.8	+/-25.6	33.8	pCi/L
Uranium-238	U	26.0	+/-177	190	pCi/L
Yttrium-88	U	-0.996	+/-5.37	10.1	pCi/L
Zinc-65	U	-3.43	+/-9.71	17.4	pCi/L
Zirconium-95	U	1.91	+/-6.80	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.17	+/-0.756	0.860	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	1.34	+/-1.00	1.63	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	11.3	+/-115	200	300	pCi/L	MYM1	04/21/14	1135	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22  
Sample ID: 346376012  
Matrix: Ground Water  
Collect Date: 03-APR-14 10:07  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.98	+/-17.7	28.3		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-5.29	+/-10.2	10.1		pCi/L					
Antimony-124	U	-4.78	+/-10.4	18.5		pCi/L					
Antimony-125	U	-8.9	+/-10.6	17.9		pCi/L					
Barium-133	U	-0.105	+/-5.47	8.40		pCi/L					
Barium-140	U	-0.365	+/-8.72	16.5		pCi/L					
Beryllium-7	U	1.11	+/-42.1	64.4		pCi/L					
Bismuth-212	U	32.0	+/-58.0	107		pCi/L					
Bismuth-214	U	-1.31	+/-11.7	16.2		pCi/L					
Cerium-139	U	2.23	+/-2.27	5.09		pCi/L					
Cerium-141	U	9.72	+/-6.87	11.1		pCi/L					
Cerium-144	U	-2.16	+/-19.1	33.1		pCi/L					
Cesium-134	U	-1.74	+/-4.76	8.43		pCi/L					
Cesium-136	U	8.20	+/-10.0	19.0		pCi/L					
Cesium-137	U	2.57	+/-4.36	8.01	10.0	pCi/L					
Chromium-51	U	-6.88	+/-36.8	65.2		pCi/L					
Cobalt-56	U	0.302	+/-4.75	8.66		pCi/L					
Cobalt-57	U	0.721	+/-2.38	4.20		pCi/L					
Cobalt-58	U	-1.48	+/-3.82	6.80		pCi/L					
Cobalt-60	U	1.71	+/-4.35	8.17		pCi/L					
Europium-152	U	-0.189	+/-11.5	20.0		pCi/L					
Europium-154	U	-4.59	+/-11.8	20.7		pCi/L					
Europium-155	U	-5.93	+/-8.83	15.1		pCi/L					
Iridium-192	U	-1.54	+/-4.28	6.44		pCi/L					
Iron-59	U	-0.105	+/-8.23	15.1		pCi/L					
Lead-210	U	75.8	+/-107	97.2		pCi/L					
Lead-212	U	1.08	+/-11.8	12.7		pCi/L					
Lead-214	UI	0.00	+/-14.3	15.3		pCi/L					
Manganese-54	U	5.68	+/-4.36	8.62		pCi/L					
Mercury-203	U	-1.25	+/-3.91	6.59		pCi/L					
Neodymium-147	U	51.8	+/-53.5	101		pCi/L					
Neptunium-239	U	-24.7	+/-24.8	41.6		pCi/L					
Niobium-94	U	-0.257	+/-3.98	6.95		pCi/L					
Niobium-95	U	-0.653	+/-4.85	8.40		pCi/L					
Potassium-40	U	87.5	+/-55.2	98.0		pCi/L					
Promethium-144	U	-0.899	+/-4.08	7.05		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22 Project: WNUC00127  
Sample ID: 346376012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.81	+/-4.91	8.53	pCi/L
Radium-228	U	2.98	+/-17.7	28.3	pCi/L
Ruthenium-106	U	-7.31	+/-37.3	64.9	pCi/L
Silver-110m	U	0.0375	+/-4.12	7.26	pCi/L
Sodium-22	U	-1.62	+/-4.17	7.30	pCi/L
Thallium-208	U	1.58	+/-5.79	7.09	pCi/L
Thorium-230	U	53.6	+/-633	975	pCi/L
Thorium-234	U	98.8	+/-134	148	pCi/L
Tin-113	U	-3.14	+/-4.78	8.21	pCi/L
Uranium-235	U	5.69	+/-29.2	34.1	pCi/L
Uranium-238	U	98.8	+/-134	148	pCi/L
Yttrium-88	U	1.10	+/-4.35	8.68	pCi/L
Zinc-65	U	5.03	+/-9.02	17.2	pCi/L
Zirconium-95	U	2.44	+/-8.31	14.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.67	+/-1.67	1.52	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	46.1	+/-2.42	2.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-20.1	+/-115	204	300	pCi/L	MYM1	04/21/14	1152	1379900	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 346376013  
Matrix: Ground Water  
Collect Date: 04-APR-14 13:35  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.130	+/-16.5	18.2		pCi/L		MJH1	04/15/14	1414 1379234	1
Americium-241	U	-10.6	+/-17.6	27.5		pCi/L					
Antimony-124	U	0.464	+/-6.57	12.1		pCi/L					
Antimony-125	U	0.712	+/-6.02	10.4		pCi/L					
Barium-133	U	2.84	+/-3.07	4.97		pCi/L					
Barium-140	U	0.442	+/-4.54	7.46		pCi/L					
Beryllium-7	U	-8.04	+/-20.0	33.5		pCi/L					
Bismuth-212	U	-3.46	+/-32.8	57.3		pCi/L					
Bismuth-214		17.1	+/-6.37	7.89		pCi/L					
Cerium-139	U	-2.08	+/-1.86	3.01		pCi/L					
Cerium-141	U	-0.571	+/-3.68	6.22		pCi/L					
Cerium-144	U	-3.06	+/-12.3	20.9		pCi/L					
Cesium-134	U	-3.49	+/-2.78	3.62		pCi/L					
Cesium-136	U	2.58	+/-5.47	10.2		pCi/L					
Cesium-137	U	1.14	+/-2.53	4.07	10.0	pCi/L					
Chromium-51	U	9.57	+/-26.2	41.1		pCi/L					
Cobalt-56	U	0.886	+/-2.87	4.46		pCi/L					
Cobalt-57	U	0.774	+/-1.57	2.76		pCi/L					
Cobalt-58	U	-1.84	+/-2.60	3.63		pCi/L					
Cobalt-60	U	4.25	+/-6.41	4.86		pCi/L					
Europium-152	U	3.27	+/-6.56	11.7		pCi/L					
Europium-154	U	5.92	+/-6.50	12.8		pCi/L					
Europium-155	U	9.15	+/-6.53	11.9		pCi/L					
Iridium-192	U	-0.351	+/-2.66	4.04		pCi/L					
Iron-59	U	4.80	+/-5.25	9.10		pCi/L					
Lead-210	U	-989	+/-1160	1270		pCi/L					
Lead-212	U	4.27	+/-6.66	6.26		pCi/L					
Lead-214	U	8.37	+/-9.31	8.73		pCi/L					
Manganese-54	U	1.36	+/-2.30	4.18		pCi/L					
Mercury-203	U	0.458	+/-2.30	4.09		pCi/L					
Neodymium-147	U	21.6	+/-27.8	52.0		pCi/L					
Neptunium-239	U	-6.21	+/-16.3	27.7		pCi/L					
Niobium-94	U	-2.51	+/-2.24	3.67		pCi/L					
Niobium-95	U	0.642	+/-2.45	4.38		pCi/L					
Potassium-40	U	13.2	+/-51.2	41.0		pCi/L					
Promethium-144	U	0.308	+/-2.28	4.04		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 346376013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.67	+/-2.78	4.94	pCi/L
Radium-228	U	0.130	+/-16.5	18.2	pCi/L
Ruthenium-106	U	11.4	+/-20.4	37.4	pCi/L
Silver-110m	U	1.04	+/-2.28	3.68	pCi/L
Sodium-22	U	0.735	+/-2.42	4.47	pCi/L
Thallium-208	U	1.53	+/-4.31	3.96	pCi/L
Thorium-230	U	-896	+/-1490	1730	pCi/L
Thorium-234	U	86.2	+/-219	210	pCi/L
Tin-113	U	0.150	+/-2.86	4.96	pCi/L
Uranium-235	U	6.38	+/-18.3	22.7	pCi/L
Uranium-238	U	86.2	+/-219	210	pCi/L
Yttrium-88	U	-2.43	+/-2.67	4.36	pCi/L
Zinc-65	U	1.41	+/-5.38	8.63	pCi/L
Zirconium-95	U	-2.17	+/-3.99	6.77	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		2.33	+/-0.833	1.04	5.00	pCi/L	DXG3	05/05/14	1746	1382543	2
Beta	U	0.291	+/-0.852	1.42	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	139	+/-86.7	140	300	pCi/L	MYM1	04/29/14	0728	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	346376014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 08:49		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.32	+/-15.5	23.2		pCi/L		MJH1	04/16/14	1226 1379234	1
Americium-241	U	-1.1	+/-14.3	21.9		pCi/L					
Antimony-124	U	-6.75	+/-7.73	12.5		pCi/L					
Antimony-125	U	5.14	+/-8.41	15.5		pCi/L					
Barium-133	U	0.609	+/-4.21	6.61		pCi/L					
Barium-140	U	3.84	+/-6.46	13.6		pCi/L					
Beryllium-7	U	9.89	+/-34.2	53.8		pCi/L					
Bismuth-212	U	32.9	+/-45.0	87.7		pCi/L					
Bismuth-214	U	3.60	+/-11.8	10.7		pCi/L					
Cerium-139	U	-0.591	+/-2.78	4.92		pCi/L					
Cerium-141	U	4.70	+/-5.26	9.85		pCi/L					
Cerium-144	U	-0.575	+/-18.2	31.7		pCi/L					
Cesium-134	U	-2.01	+/-3.67	6.32		pCi/L					
Cesium-136	U	-6.44	+/-8.21	13.5		pCi/L					
Cesium-137	U	-1.73	+/-4.08	6.63	10.0	pCi/L					
Chromium-51	U	7.59	+/-35.3	62.7		pCi/L					
Cobalt-56	U	3.82	+/-3.14	6.52		pCi/L					
Cobalt-57	U	-1.48	+/-2.33	4.09		pCi/L					
Cobalt-58	U	-2.39	+/-3.45	5.84		pCi/L					
Cobalt-60	U	-0.409	+/-4.19	6.97		pCi/L					
Europium-152	U	-7.94	+/-10.5	15.7		pCi/L					
Europium-154	U	-1.1	+/-8.63	16.3		pCi/L					
Europium-155	U	-4.92	+/-10.4	17.0		pCi/L					
Iridium-192	U	-1.14	+/-3.30	5.67		pCi/L					
Iron-59	U	-1.79	+/-7.37	13.0		pCi/L					
Lead-210	U	72.9	+/-319	503		pCi/L					
Lead-212	U	7.12	+/-8.74	11.7		pCi/L					
Lead-214	U	2.68	+/-12.5	15.1		pCi/L					
Manganese-54	U	0.536	+/-3.62	6.62		pCi/L					
Mercury-203	U	2.23	+/-3.57	6.53		pCi/L					
Neodymium-147	U	-32.1	+/-39.2	67.5		pCi/L					
Neptunium-239	U	-13.8	+/-25.2	44.3		pCi/L					
Niobium-94	U	-1.81	+/-3.16	5.47		pCi/L					
Niobium-95	U	0.968	+/-3.44	6.44		pCi/L					
Potassium-40	U	-2.84	+/-46.2	76.8		pCi/L					
Promethium-144	U	0.180	+/-3.13	5.73		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24 Project: WNUC00127  
Sample ID: 346376014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.94	+/-4.06	7.38	pCi/L
Radium-228	U	4.32	+/-15.5	23.2	pCi/L
Ruthenium-106	U	-7.04	+/-29.6	53.1	pCi/L
Silver-110m	U	-2.84	+/-3.07	5.14	pCi/L
Sodium-22	U	-0.388	+/-3.04	5.76	pCi/L
Thallium-208	U	5.11	+/-5.65	5.21	pCi/L
Thorium-230	U	-102	+/-965	1560	pCi/L
Thorium-234	U	42.4	+/-150	226	pCi/L
Tin-113	U	-0.289	+/-4.02	7.03	pCi/L
Uranium-235	UI	0.00	+/-31.1	30.4	pCi/L
Uranium-238	U	42.4	+/-150	226	pCi/L
Yttrium-88	U	0.114	+/-2.82	5.71	pCi/L
Zinc-65	U	-3.02	+/-6.99	12.0	pCi/L
Zirconium-95	U	-4.06	+/-6.33	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.184	+/-0.816	2.00	5.00	pCi/L	DXG3	05/06/14	0715	1382543	2
Beta	U	-1.95	+/-2.56	4.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	101	+/-84.1	139	300	pCi/L	MYM1	04/29/14	0744	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	346376015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 10:42		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.32	+/-16.4	22.2		pCi/L		MJH1	04/16/14	1238 1379234	1
Americium-241	U	-15	+/-12.5	19.9		pCi/L					
Antimony-124	U	-6.22	+/-7.82	12.9		pCi/L					
Antimony-125	U	-3.01	+/-8.10	13.8		pCi/L					
Barium-133	U	-2.26	+/-4.68	6.81		pCi/L					
Barium-140	U	-0.644	+/-5.56	10.7		pCi/L					
Beryllium-7	U	15.5	+/-25.3	49.4		pCi/L					
Bismuth-212	U	-0.704	+/-42.7	78.2		pCi/L					
Bismuth-214		18.4	+/-11.1	10.6		pCi/L					
Cerium-139	U	-0.864	+/-2.85	4.63		pCi/L					
Cerium-141	U	4.52	+/-5.63	9.41		pCi/L					
Cerium-144	U	-15.2	+/-18.0	26.7		pCi/L					
Cesium-134	U	0.501	+/-3.29	6.14		pCi/L					
Cesium-136	U	-3.29	+/-8.44	14.6		pCi/L					
Cesium-137	U	-1.05	+/-2.84	5.06	10.0	pCi/L					
Chromium-51	U	-22	+/-29.1	48.4		pCi/L					
Cobalt-56	U	2.77	+/-3.12	6.29		pCi/L					
Cobalt-57	U	0.731	+/-2.18	3.99		pCi/L					
Cobalt-58	U	0.172	+/-3.55	5.95		pCi/L					
Cobalt-60	U	-0.38	+/-3.33	6.26		pCi/L					
Europium-152	U	-2.99	+/-10.4	15.0		pCi/L					
Europium-154	U	-2.96	+/-8.55	15.7		pCi/L					
Europium-155	U	3.08	+/-8.89	16.4		pCi/L					
Iridium-192	U	-0.604	+/-2.98	5.18		pCi/L					
Iron-59	U	0.309	+/-6.19	11.5		pCi/L					
Lead-210	U	118	+/-344	388		pCi/L					
Lead-212	U	-2.74	+/-7.94	10.7		pCi/L					
Lead-214	U	8.75	+/-9.40	11.1		pCi/L					
Manganese-54	U	-0.999	+/-3.17	5.58		pCi/L					
Mercury-203	U	-1.51	+/-3.22	5.51		pCi/L					
Neodymium-147	U	4.96	+/-42.0	74.3		pCi/L					
Neptunium-239	U	-1.37	+/-23.6	42.4		pCi/L					
Niobium-94	U	0.741	+/-2.94	5.49		pCi/L					
Niobium-95	U	-3.05	+/-3.85	5.64		pCi/L					
Potassium-40	U	6.09	+/-46.2	60.2		pCi/L					
Promethium-144	U	1.87	+/-3.19	6.09		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 26 Project: WNUC00127  
Sample ID: 346376015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.536	+/-3.87	6.69	pCi/L
Radium-228	U	-7.32	+/-16.4	22.2	pCi/L
Ruthenium-106	U	7.83	+/-27.3	51.5	pCi/L
Silver-110m	U	-0.395	+/-2.36	4.35	pCi/L
Sodium-22	U	-0.582	+/-2.93	5.52	pCi/L
Thallium-208	U	-0.867	+/-3.82	6.17	pCi/L
Thorium-230	U	-1170	+/-972	1450	pCi/L
Thorium-234	U	2.42	+/-144	226	pCi/L
Tin-113	U	1.46	+/-3.88	7.04	pCi/L
Uranium-235	U	14.1	+/-21.7	28.2	pCi/L
Uranium-238	U	2.42	+/-144	226	pCi/L
Yttrium-88	U	0.823	+/-2.80	5.97	pCi/L
Zinc-65	U	-0.0565	+/-7.74	13.9	pCi/L
Zirconium-95	U	-2.39	+/-5.96	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.74	+/-2.28	3.82	5.00	pCi/L	DXG3	05/06/14	0716	1382543	2
Beta		4.63	+/-2.47	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-2.17	+/-78.8	139	300	pCi/L	MYM1	04/29/14	0800	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	346376016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 09:42		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.58	+/-22.1	26.4		pCi/L		MJH1	04/16/14	1434 1379234	1
Americium-241	U	-0.838	+/-31.6	44.6		pCi/L					
Antimony-124	U	-5.31	+/-9.29	16.4		pCi/L					
Antimony-125	U	9.86	+/-10.2	19.3		pCi/L					
Barium-133	U	3.53	+/-5.14	8.48		pCi/L					
Barium-140	U	-1.24	+/-6.46	12.3		pCi/L					
Beryllium-7	U	48.1	+/-88.7	64.8		pCi/L					
Bismuth-212	U	-61.4	+/-70.7	94.3		pCi/L					
Bismuth-214		21.8	+/-14.1	14.0		pCi/L					
Cerium-139	U	0.308	+/-3.44	6.16		pCi/L					
Cerium-141	U	-3.45	+/-7.69	12.3		pCi/L					
Cerium-144	U	-14.1	+/-23.3	40.7		pCi/L					
Cesium-134	U	2.83	+/-6.70	8.49		pCi/L					
Cesium-136	U	1.03	+/-7.27	13.9		pCi/L					
Cesium-137	U	0.0855	+/-4.01	7.29	10.0	pCi/L					
Chromium-51	U	23.7	+/-41.0	74.0		pCi/L					
Cobalt-56	U	0.882	+/-3.87	7.46		pCi/L					
Cobalt-57	U	-0.778	+/-2.95	5.27		pCi/L					
Cobalt-58	U	-0.0562	+/-4.52	8.04		pCi/L					
Cobalt-60	U	1.64	+/-4.19	8.30		pCi/L					
Europium-152	U	1.88	+/-12.1	21.3		pCi/L					
Europium-154	U	0.968	+/-11.8	22.4		pCi/L					
Europium-155	U	10.5	+/-13.0	23.0		pCi/L					
Iridium-192	U	-1.65	+/-4.17	7.07		pCi/L					
Iron-59	U	10.3	+/-6.93	15.1		pCi/L					
Lead-210	U	596	+/-1290	1480		pCi/L					
Lead-212	U	1.47	+/-12.5	16.8		pCi/L					
Lead-214	UI	0.00	+/-14.2	21.1		pCi/L					
Manganese-54	U	-2.04	+/-3.60	6.38		pCi/L					
Mercury-203	U	-0.844	+/-4.25	7.35		pCi/L					
Neodymium-147	U	-24	+/-45.0	73.1		pCi/L					
Neptunium-239	U	27.6	+/-32.4	60.9		pCi/L					
Niobium-94	U	-2.17	+/-4.41	6.57		pCi/L					
Niobium-95	U	1.28	+/-4.08	7.59		pCi/L					
Potassium-40	U	39.7	+/-52.5	73.0		pCi/L					
Promethium-144	U	2.39	+/-3.82	7.28		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27 Project: WNUC00127  
Sample ID: 346376016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.12	+/-4.55	8.81	pCi/L
Radium-228	U	2.58	+/-22.1	26.4	pCi/L
Ruthenium-106	U	12.1	+/-38.2	62.9	pCi/L
Silver-110m	U	-0.401	+/-3.86	6.90	pCi/L
Sodium-22	U	0.206	+/-4.13	7.81	pCi/L
Thallium-208	U	-2.23	+/-5.42	8.08	pCi/L
Thorium-230	U	-428	+/-1870	2820	pCi/L
Thorium-234	U	77.9	+/-313	367	pCi/L
Tin-113	U	0.307	+/-4.47	8.29	pCi/L
Uranium-235	U	0.377	+/-29.4	47.4	pCi/L
Uranium-238	U	77.9	+/-313	367	pCi/L
Yttrium-88	U	-1.28	+/-4.29	7.96	pCi/L
Zinc-65	U	0.619	+/-8.91	16.7	pCi/L
Zirconium-95	U	11.4	+/-6.92	14.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	4.77	+/-3.47	4.62	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	10.4	+/-3.28	3.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-48.4	+/-91.5	164	300	pCi/L	MYM1	04/30/14	2213	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	346376017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 11:00		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.45	+/-19.0	20.0		pCi/L		MJH1	04/16/14	1434 1379234	1
Americium-241	U	-0.813	+/-20.5	35.5		pCi/L					
Antimony-124	U	-0.37	+/-9.49	18.1		pCi/L					
Antimony-125	U	0.669	+/-9.25	15.0		pCi/L					
Barium-133	U	3.32	+/-4.72	7.71		pCi/L					
Barium-140	U	-1.48	+/-8.25	15.5		pCi/L					
Beryllium-7	U	-14.5	+/-31.0	54.8		pCi/L					
Bismuth-212	U	-41.3	+/-62.6	87.5		pCi/L					
Bismuth-214	U	3.79	+/-10.0	14.1		pCi/L					
Cerium-139	U	-1.06	+/-2.81	4.95		pCi/L					
Cerium-141	U	-9.73	+/-7.58	10.7		pCi/L					
Cerium-144	U	1.91	+/-19.1	34.7		pCi/L					
Cesium-134	U	-0.575	+/-3.48	6.18		pCi/L					
Cesium-136	U	-0.145	+/-8.59	16.0		pCi/L					
Cesium-137	U	1.60	+/-4.65	7.71	10.0	pCi/L					
Chromium-51	U	40.4	+/-36.4	64.7		pCi/L					
Cobalt-56	U	0.195	+/-3.89	6.98		pCi/L					
Cobalt-57	U	-0.978	+/-3.09	4.52		pCi/L					
Cobalt-58	U	-1.32	+/-3.03	5.24		pCi/L					
Cobalt-60	U	-1.78	+/-3.06	5.28		pCi/L					
Europium-152	U	-2.61	+/-9.90	17.0		pCi/L					
Europium-154	U	3.00	+/-9.74	18.9		pCi/L					
Europium-155	U	-4.08	+/-11.2	18.5		pCi/L					
Iridium-192	U	-2.57	+/-3.48	5.79		pCi/L					
Iron-59	U	0.115	+/-7.54	14.1		pCi/L					
Lead-210	U	95.0	+/-1010	932		pCi/L					
Lead-212	U	3.29	+/-8.41	12.5		pCi/L					
Lead-214	U	2.68	+/-10.2	13.8		pCi/L					
Manganese-54	U	-1.62	+/-3.70	5.81		pCi/L					
Mercury-203	U	-0.357	+/-3.68	6.44		pCi/L					
Neodymium-147	U	-16.7	+/-51.6	86.1		pCi/L					
Neptunium-239	U	15.4	+/-32.1	49.9		pCi/L					
Niobium-94	U	2.94	+/-4.81	5.35		pCi/L					
Niobium-95	U	0.000837	+/-4.33	6.71		pCi/L					
Potassium-40	U	9.74	+/-61.6	62.5		pCi/L					
Promethium-144	U	-2.22	+/-4.04	5.83		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	346376017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-3.97	7.47	pCi/L
Radium-228	U	4.45	+/-19.0	20.0	pCi/L
Ruthenium-106	U	-22.7	+/-27.5	46.1	pCi/L
Silver-110m	U	-3.12	+/-3.50	5.81	pCi/L
Sodium-22	U	0.994	+/-3.43	6.65	pCi/L
Thallium-208	UI	0.00	+/-5.54	4.73	pCi/L
Thorium-230	U	86.5	+/-1290	2230	pCi/L
Thorium-234	U	-134	+/-200	318	pCi/L
Tin-113	U	-3.35	+/-4.33	7.08	pCi/L
Uranium-235	U	-36.7	+/-26.5	35.4	pCi/L
Uranium-238	U	-134	+/-200	318	pCi/L
Yttrium-88	U	-0.355	+/-4.35	8.24	pCi/L
Zinc-65	U	0.402	+/-7.37	13.8	pCi/L
Zirconium-95	U	-5.22	+/-6.27	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.37	+/-3.55	4.97	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		59.2	+/-4.29	2.97	5.00	pCi/L					
Alpha		9.25	+/-4.80	4.99	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta		63.3	+/-6.26	4.50	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	125	+/-85.5	139	300	pCi/L	MYM1	04/29/14	0833	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28  
Sample ID: 346376017

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 29  
Sample ID: 346376018  
Matrix: Ground Water  
Collect Date: 03-APR-14 09:30  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.2	+/-18.4	32.0		pCi/L		MJH1	04/22/14	1155 1379234	1
Americium-241	U	-6.79	+/-12.1	18.2		pCi/L					
Antimony-124	U	-7.42	+/-10.6	17.9		pCi/L					
Antimony-125	U	-4.4	+/-9.88	17.4		pCi/L					
Barium-133	U	3.04	+/-4.38	8.27		pCi/L					
Barium-140	U	-1.39	+/-12.4	23.0		pCi/L					
Beryllium-7	U	-18	+/-38.8	67.7		pCi/L					
Bismuth-212	U	19.3	+/-56.0	103		pCi/L					
Bismuth-214	U	7.56	+/-14.0	17.1		pCi/L					
Cerium-139	U	-0.898	+/-2.94	5.19		pCi/L					
Cerium-141	U	2.61	+/-6.29	11.6		pCi/L					
Cerium-144	U	2.91	+/-22.9	34.9		pCi/L					
Cesium-134	U	0.159	+/-4.32	8.02		pCi/L					
Cesium-136	U	-2.7	+/-13.2	23.6		pCi/L					
Cesium-137	U	-0.679	+/-4.86	7.32	10.0	pCi/L					
Chromium-51	U	-11.2	+/-45.1	77.1		pCi/L					
Cobalt-56	U	1.42	+/-4.50	8.51		pCi/L					
Cobalt-57	U	0.107	+/-2.65	4.49		pCi/L					
Cobalt-58	U	1.57	+/-4.36	8.33		pCi/L					
Cobalt-60	U	-6.51	+/-4.60	6.65		pCi/L					
Europium-152	U	-3.97	+/-10.4	17.6		pCi/L					
Europium-154	U	-12.5	+/-11.4	18.6		pCi/L					
Europium-155	U	-6.93	+/-10.4	17.1		pCi/L					
Iridium-192	U	-2.82	+/-3.79	6.26		pCi/L					
Iron-59	U	3.48	+/-9.37	17.9		pCi/L					
Lead-210	U	-195	+/-272	408		pCi/L					
Lead-212	U	0.266	+/-8.24	12.8		pCi/L					
Lead-214	U	3.28	+/-12.0	15.4		pCi/L					
Manganese-54	U	2.65	+/-3.49	6.97		pCi/L					
Mercury-203	U	4.74	+/-4.25	7.95		pCi/L					
Neodymium-147	U	89.0	+/-80.8	135		pCi/L					
Neptunium-239	U	17.6	+/-27.2	47.8		pCi/L					
Niobium-94	U	6.88	+/-5.02	7.12		pCi/L					
Niobium-95	U	-0.462	+/-5.08	8.02		pCi/L					
Potassium-40	U	-10.5	+/-59.7	101		pCi/L					
Promethium-144	U	0.411	+/-4.33	6.72		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 29 Project: WNUC00127  
Sample ID: 346376018 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.06	+/-4.14	7.26	pCi/L
Radium-228	U	20.2	+/-18.4	32.0	pCi/L
Ruthenium-106	U	-26.2	+/-35.5	59.2	pCi/L
Silver-110m	U	2.86	+/-3.82	7.27	pCi/L
Sodium-22	U	-4.43	+/-4.03	6.57	pCi/L
Thallium-208	U	-3.48	+/-5.27	7.15	pCi/L
Thorium-230	U	-50.3	+/-1060	1550	pCi/L
Thorium-234	U	2.65	+/-196	215	pCi/L
Tin-113	U	-1.99	+/-5.14	8.65	pCi/L
Uranium-235	U	4.87	+/-23.2	34.9	pCi/L
Uranium-238	U	2.65	+/-196	215	pCi/L
Yttrium-88	U	0.0953	+/-4.09	8.20	pCi/L
Zinc-65	U	-7.0	+/-8.35	13.7	pCi/L
Zirconium-95	U	-3.7	+/-7.85	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.78	+/-3.25	4.80	5.00	pCi/L	DXG3	05/05/14	1304	1382544	2
Beta		11.4	+/-3.44	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-36.2	+/-90.9	162	300	pCi/L	MYM1	04/30/14	2230	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	346376019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 09:47		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		13.2	+/-1.50	0.408	1.00	pCi/L		HAKB	05/12/14	1650 1386260	1
Uranium-235/236		0.696	+/-0.417	0.378	1.00	pCi/L					
Uranium-238		4.14	+/-0.845	0.345	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.51	+/-18.5	27.4		pCi/L		MJH1	04/16/14	1435 1379234	2
Americium-241	U	22.0	+/-31.6	52.2		pCi/L					
Antimony-124	U	4.82	+/-10.3	21.1		pCi/L					
Antimony-125	U	4.55	+/-10.4	19.5		pCi/L					
Barium-133	U	-1.7	+/-4.75	8.44		pCi/L					
Barium-140	U	0.051	+/-8.96	17.1		pCi/L					
Beryllium-7	U	29.4	+/-42.6	64.7		pCi/L					
Bismuth-212	U	44.9	+/-48.3	96.7		pCi/L					
Bismuth-214	U	14.7	+/-12.1	17.2		pCi/L					
Cerium-139	U	-1.95	+/-3.25	5.46		pCi/L					
Cerium-141	U	5.47	+/-6.42	11.7		pCi/L					
Cerium-144	U	1.15	+/-21.8	38.3		pCi/L					
Cesium-134	U	3.50	+/-4.33	8.46		pCi/L					
Cesium-136	U	1.21	+/-9.56	18.3		pCi/L					
Cesium-137	U	1.08	+/-3.73	7.00	10.0	pCi/L					
Chromium-51	U	17.5	+/-38.7	72.4		pCi/L					
Cobalt-56	U	-1.77	+/-3.94	6.79		pCi/L					
Cobalt-57	U	-0.477	+/-2.97	5.15		pCi/L					
Cobalt-58	U	-0.502	+/-4.52	6.98		pCi/L					
Cobalt-60	U	1.66	+/-4.27	8.43		pCi/L					
Europium-152	U	-0.0748	+/-10.4	18.9		pCi/L					
Europium-154	U	-9.17	+/-11.3	19.1		pCi/L					
Europium-155	U	-0.441	+/-13.1	22.9		pCi/L					
Iridium-192	U	0.155	+/-3.62	6.62		pCi/L					
Iron-59	U	3.57	+/-6.98	14.3		pCi/L					
Lead-210	U	-996	+/-1330	1820		pCi/L					
Lead-212	U	-1.09	+/-9.28	13.5		pCi/L					
Lead-214	U	4.85	+/-9.82	16.2		pCi/L					
Manganese-54	U	0.119	+/-3.75	6.82		pCi/L					
Mercury-203	U	0.898	+/-4.13	7.22		pCi/L					
Neodymium-147	U	-4.56	+/-52.6	95.2		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 346376019

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammaspec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	10.0	+/-31.9	56.8	pCi/L
Niobium-94	U	1.27	+/-4.48	7.21	pCi/L
Niobium-95	U	-1.64	+/-3.92	6.80	pCi/L
Potassium-40	U	61.8	+/-41.3	91.7	pCi/L
Promethium-144	U	0.793	+/-3.61	6.67	pCi/L
Promethium-146	U	-2.47	+/-4.34	7.55	pCi/L
Radium-228	U	-7.51	+/-18.5	27.4	pCi/L
Ruthenium-106	U	3.18	+/-34.5	63.1	pCi/L
Silver-110m	U	-1.9	+/-3.75	6.47	pCi/L
Sodium-22	U	-3.23	+/-3.98	6.75	pCi/L
Thallium-208	UI	0.00	+/-6.61	6.33	pCi/L
Thorium-230	U	1820	+/-2110	3030	pCi/L
Thorium-234	U	170	+/-359	413	pCi/L
Tin-113	U	1.51	+/-4.75	8.84	pCi/L
Uranium-235	U	-17.4	+/-25.5	38.1	pCi/L
Uranium-238	U	170	+/-359	413	pCi/L
Yttrium-88	U	-0.177	+/-5.09	9.61	pCi/L
Zinc-65	U	-1.22	+/-7.59	14.2	pCi/L
Zirconium-95	U	1.61	+/-6.62	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	24.3	+/-6.33	4.54	5.00	pCi/L	DXG3	05/05/14	1304	1382544	3
Beta	33.2	+/-4.97	4.79	5.00	pCi/L					
Alpha	19.8	+/-6.49	4.55	5.00	pCi/L	DXG3	05/06/14	1124	1382544	4
Beta	32.4	+/-5.12	3.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	2.05	+/-94.4	165	300	pCi/L	MYM1	04/30/14	2246	1379901	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	346376019	Client ID:	WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			79.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	346376020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 14:50		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.53	+/-18.4	30.5		pCi/L		MJH1	04/16/14	1435 1379234	1
Americium-241	U	3.06	+/-20.6	31.7		pCi/L					
Antimony-124	U	0.344	+/-9.76	18.8		pCi/L					
Antimony-125	U	-0.609	+/-9.80	17.5		pCi/L					
Barium-133	U	-2.97	+/-5.07	7.44		pCi/L					
Barium-140	U	0.290	+/-8.06	15.6		pCi/L					
Beryllium-7	U	24.5	+/-35.4	66.7		pCi/L					
Bismuth-212	U	-22.2	+/-52.3	89.5		pCi/L					
Bismuth-214	U	10.2	+/-8.11	15.8		pCi/L					
Cerium-139	U	1.67	+/-3.72	6.45		pCi/L					
Cerium-141	U	2.92	+/-7.45	12.9		pCi/L					
Cerium-144	U	16.2	+/-23.3	41.2		pCi/L					
Cesium-134	U	-1.43	+/-3.87	6.67		pCi/L					
Cesium-136	U	3.85	+/-10.1	17.4		pCi/L					
Cesium-137	U	-1.83	+/-3.77	6.45	10.0	pCi/L					
Chromium-51	U	-30.2	+/-47.4	72.0		pCi/L					
Cobalt-56	U	0.182	+/-4.19	7.52		pCi/L					
Cobalt-57	U	0.288	+/-3.31	5.66		pCi/L					
Cobalt-58	U	-0.906	+/-4.13	7.22		pCi/L					
Cobalt-60	U	0.705	+/-3.96	7.65		pCi/L					
Europium-152	U	0.901	+/-11.5	19.6		pCi/L					
Europium-154	U	-1.7	+/-9.98	18.6		pCi/L					
Europium-155	U	-0.349	+/-12.9	22.1		pCi/L					
Iridium-192	U	0.466	+/-4.18	7.51		pCi/L					
Iron-59	U	-1.41	+/-7.56	14.0		pCi/L					
Lead-210	U	96.3	+/-721	913		pCi/L					
Lead-212	U	-2.45	+/-8.51	13.4		pCi/L					
Lead-214	UI	0.00	+/-15.0	17.2		pCi/L					
Manganese-54	U	1.38	+/-4.19	7.67		pCi/L					
Mercury-203	U	1.48	+/-4.35	7.91		pCi/L					
Neodymium-147	U	15.2	+/-53.3	97.9		pCi/L					
Neptunium-239	U	-10.7	+/-33.6	56.6		pCi/L					
Niobium-94	U	-2.31	+/-3.84	6.45		pCi/L					
Niobium-95	U	1.01	+/-4.48	8.12		pCi/L					
Potassium-40	U	21.1	+/-66.3	68.1		pCi/L					
Promethium-144	U	0.723	+/-3.88	7.00		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32 Project: WNUC00127  
Sample ID: 346376020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.351	+/-4.69	8.35	pCi/L
Radium-228	U	3.53	+/-18.4	30.5	pCi/L
Ruthenium-106	U	-23.6	+/-37.2	60.6	pCi/L
Silver-110m	U	1.42	+/-3.54	6.61	pCi/L
Sodium-22	U	-1.53	+/-3.65	6.53	pCi/L
Thallium-208	U	-0.385	+/-4.75	7.88	pCi/L
Thorium-230	U	1870	+/-1640	2180	pCi/L
Thorium-234	UI	0.00	+/-199	271	pCi/L
Tin-113	U	0.997	+/-4.56	8.34	pCi/L
Uranium-235	U	11.3	+/-25.3	43.9	pCi/L
Uranium-238	UI	0.00	+/-199	271	pCi/L
Yttrium-88	U	5.91	+/-4.45	9.38	pCi/L
Zinc-65	U	-2.24	+/-7.81	14.2	pCi/L
Zirconium-95	U	-0.0312	+/-6.46	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	14.2	+/-6.57	4.92	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	268	+/-10.7	2.89	5.00	pCi/L					
Alpha	6.46	+/-3.86	4.94	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta	276	+/-11.0	3.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	455	+/-99.4	137	300	pCi/L	MYM1	04/29/14	0921	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 346376020

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	346376021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 08:28		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.45	+/-23.9	22.5		pCi/L		MJH1	04/14/14	0904 1379235	1
Americium-241	U	-12	+/-18.9	33.8		pCi/L					
Antimony-124	U	2.82	+/-6.62	14.5		pCi/L					
Antimony-125	U	-1.91	+/-10.2	15.9		pCi/L					
Barium-133	U	-2.0	+/-4.36	6.68		pCi/L					
Barium-140	U	2.81	+/-5.83	12.4		pCi/L					
Beryllium-7	U	-21.5	+/-29.4	49.7		pCi/L					
Bismuth-212	U	-40.4	+/-64.4	90.0		pCi/L					
Bismuth-214		15.9	+/-14.5	11.5		pCi/L					
Cerium-139	U	-2.33	+/-3.67	5.18		pCi/L					
Cerium-141	U	1.98	+/-7.50	9.49		pCi/L					
Cerium-144	U	10.2	+/-19.1	34.9		pCi/L					
Cesium-134	U	1.44	+/-3.55	6.92		pCi/L					
Cesium-136	U	2.78	+/-6.91	13.6		pCi/L					
Cesium-137	U	1.40	+/-3.43	6.38	10.0	pCi/L					
Chromium-51	U	12.8	+/-29.6	56.1		pCi/L					
Cobalt-56	U	2.22	+/-3.46	6.88		pCi/L					
Cobalt-57	U	-0.293	+/-2.50	4.43		pCi/L					
Cobalt-58	U	2.89	+/-3.48	7.03		pCi/L					
Cobalt-60	U	3.41	+/-4.26	6.75		pCi/L					
Europium-152	U	1.95	+/-11.2	18.0		pCi/L					
Europium-154	U	-4.87	+/-9.23	16.7		pCi/L					
Europium-155	U	11.5	+/-10.7	20.3		pCi/L					
Iridium-192	U	-0.24	+/-3.46	5.57		pCi/L					
Iron-59	U	4.41	+/-7.16	14.3		pCi/L					
Lead-210	U	560	+/-740	1310		pCi/L					
Lead-212	U	9.09	+/-7.58	9.41		pCi/L					
Lead-214	UI	0.00	+/-13.9	12.7		pCi/L					
Manganese-54	U	-0.505	+/-3.05	5.62		pCi/L					
Mercury-203	U	-1.05	+/-4.24	6.36		pCi/L					
Neodymium-147	U	1.44	+/-39.8	71.9		pCi/L					
Neptunium-239	U	0.739	+/-26.5	47.4		pCi/L					
Niobium-94	U	1.30	+/-2.99	5.82		pCi/L					
Niobium-95	U	2.28	+/-3.87	7.52		pCi/L					
Potassium-40	U	-11.9	+/-50.8	90.3		pCi/L					
Promethium-144	U	-0.515	+/-3.82	6.27		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	346376021	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-4.09	6.83	pCi/L
Radium-228	U	1.45	+/-23.9	22.5	pCi/L
Ruthenium-106	U	-14	+/-30.1	51.0	pCi/L
Silver-110m	U	0.655	+/-3.00	5.51	pCi/L
Sodium-22	U	-3.1	+/-3.44	5.83	pCi/L
Thallium-208	U	0.474	+/-5.64	6.31	pCi/L
Thorium-230	U	1510	+/-2040	2090	pCi/L
Thorium-234	U	-35.7	+/-223	347	pCi/L
Tin-113	U	0.440	+/-4.49	7.28	pCi/L
Uranium-235	U	7.03	+/-26.6	37.8	pCi/L
Uranium-238	U	-35.7	+/-223	347	pCi/L
Yttrium-88	U	3.56	+/-4.11	9.03	pCi/L
Zinc-65	U	-3.75	+/-7.56	13.0	pCi/L
Zirconium-95	U	2.10	+/-5.72	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.80	+/-1.95	3.12	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		5.52	+/-3.22	4.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	119	+/-87.1	143	300	pCi/L	MYM1	04/29/14	0937	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	346376022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	03-APR-14 09:06		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.3	+/-15.3	22.9		pCi/L		MJH1	04/14/14	0904 1379235	1
Americium-241	U	15.4	+/-10.6	18.5		pCi/L					
Antimony-124	U	6.24	+/-7.51	16.1		pCi/L					
Antimony-125	U	0.799	+/-8.82	15.6		pCi/L					
Barium-133	U	-2.6	+/-4.55	6.70		pCi/L					
Barium-140	U	1.34	+/-6.46	12.0		pCi/L					
Beryllium-7	U	10.9	+/-29.2	52.6		pCi/L					
Bismuth-212	U	38.4	+/-41.1	81.4		pCi/L					
Bismuth-214	U	1.27	+/-11.2	11.5		pCi/L					
Cerium-139	U	-0.0207	+/-3.31	4.55		pCi/L					
Cerium-141	U	0.656	+/-5.76	9.42		pCi/L					
Cerium-144	U	-7.51	+/-19.1	32.1		pCi/L					
Cesium-134	U	1.64	+/-3.69	6.94		pCi/L					
Cesium-136	U	-8.4	+/-10.1	13.0		pCi/L					
Cesium-137	U	2.20	+/-3.44	6.58	10.0	pCi/L					
Chromium-51	U	-6.87	+/-32.5	57.1		pCi/L					
Cobalt-56	U	1.72	+/-3.25	6.21		pCi/L					
Cobalt-57	U	-3.06	+/-2.29	3.68		pCi/L					
Cobalt-58	U	3.07	+/-3.13	5.64		pCi/L					
Cobalt-60	U	-1.82	+/-3.78	6.64		pCi/L					
Europium-152	U	-3.48	+/-9.12	15.8		pCi/L					
Europium-154	U	-11.8	+/-9.71	15.5		pCi/L					
Europium-155	U	-1.4	+/-9.36	16.1		pCi/L					
Iridium-192	U	0.629	+/-3.30	5.93		pCi/L					
Iron-59	U	-2.73	+/-6.25	11.3		pCi/L					
Lead-210	U	63.3	+/-319	282		pCi/L					
Lead-212	U	-0.0819	+/-6.79	11.2		pCi/L					
Lead-214	U	7.33	+/-11.9	14.8		pCi/L					
Manganese-54	U	4.79	+/-2.92	6.13		pCi/L					
Mercury-203	U	0.700	+/-3.26	5.91		pCi/L					
Neodymium-147	U	5.20	+/-41.1	72.6		pCi/L					
Neptunium-239	U	-0.507	+/-25.7	44.3		pCi/L					
Niobium-94	U	3.08	+/-3.17	5.93		pCi/L					
Niobium-95	U	0.824	+/-3.52	6.50		pCi/L					
Potassium-40	U	49.9	+/-68.9	66.8		pCi/L					
Promethium-144	U	2.39	+/-3.87	5.76		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Project: WNUC00127  
Sample ID: 346376022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.22	+/-4.06	6.69	pCi/L
Radium-228	U	-11.3	+/-15.3	22.9	pCi/L
Ruthenium-106	U	-3.4	+/-27.9	50.7	pCi/L
Silver-110m	U	-3.46	+/-3.02	4.99	pCi/L
Sodium-22	U	-4.08	+/-3.43	5.49	pCi/L
Thallium-208	U	-2.75	+/-4.38	7.00	pCi/L
Thorium-230	U	-164	+/-805	1340	pCi/L
Thorium-234	U	12.3	+/-151	159	pCi/L
Tin-113	U	1.32	+/-4.28	7.71	pCi/L
Uranium-235	U	-11.8	+/-23.6	31.7	pCi/L
Uranium-238	U	12.3	+/-151	159	pCi/L
Yttrium-88	U	0.726	+/-3.55	7.15	pCi/L
Zinc-65	U	4.19	+/-6.87	12.3	pCi/L
Zirconium-95	U	2.59	+/-5.97	11.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.664	+/-1.73	4.62	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		4.12	+/-2.70	4.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	50.9	+/-82.4	140	300	pCi/L	MYM1	04/29/14	0954	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	346376023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 11:53		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.297	+/-18.0	28.7		pCi/L		MJH1	04/14/14	0916 1379235	1
Americium-241	U	8.64	+/-15.5	26.0		pCi/L					
Antimony-124	U	11.1	+/-6.86	17.0		pCi/L					
Antimony-125	U	-8.03	+/-9.38	14.9		pCi/L					
Barium-133	U	-1.81	+/-4.71	7.14		pCi/L					
Barium-140	U	-3.05	+/-5.14	8.86		pCi/L					
Beryllium-7	U	4.13	+/-31.2	53.0		pCi/L					
Bismuth-212	U	19.6	+/-47.0	89.9		pCi/L					
Bismuth-214		40.9	+/-12.5	13.8		pCi/L					
Cerium-139	U	-1.57	+/-3.00	5.01		pCi/L					
Cerium-141	U	-0.741	+/-5.18	8.89		pCi/L					
Cerium-144	U	2.67	+/-21.8	34.1		pCi/L					
Cesium-134	U	3.78	+/-3.31	6.89		pCi/L					
Cesium-136	U	7.41	+/-5.94	11.2		pCi/L					
Cesium-137	U	2.28	+/-6.13	5.96	10.0	pCi/L					
Chromium-51	U	-0.813	+/-29.5	52.9		pCi/L					
Cobalt-56	U	-0.192	+/-3.47	6.34		pCi/L					
Cobalt-57	U	0.532	+/-2.54	4.47		pCi/L					
Cobalt-58	U	2.30	+/-3.38	6.05		pCi/L					
Cobalt-60	U	1.15	+/-3.71	7.31		pCi/L					
Europium-152	U	-7.15	+/-9.39	16.0		pCi/L					
Europium-154	U	9.19	+/-7.72	19.4		pCi/L					
Europium-155	U	3.14	+/-10.1	18.1		pCi/L					
Iridium-192	U	1.01	+/-3.23	5.93		pCi/L					
Iron-59	U	5.90	+/-6.75	13.6		pCi/L					
Lead-210	U	-25.1	+/-399	628		pCi/L					
Lead-212	U	0.488	+/-8.21	10.4		pCi/L					
Lead-214		48.8	+/-13.2	13.1		pCi/L					
Manganese-54	U	-0.861	+/-3.94	6.06		pCi/L					
Mercury-203	U	4.68	+/-7.61	5.78		pCi/L					
Neodymium-147	U	-18.7	+/-31.5	52.7		pCi/L					
Neptunium-239	U	6.04	+/-27.0	47.8		pCi/L					
Niobium-94	U	0.0226	+/-3.11	5.74		pCi/L					
Niobium-95	U	-1.75	+/-4.01	6.00		pCi/L					
Potassium-40	U	-26.6	+/-50.0	78.3		pCi/L					
Promethium-144	U	-0.522	+/-3.04	5.53		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 39 Project: WNUC00127  
Sample ID: 346376023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.68	+/-4.33	7.31	pCi/L
Radium-228	U	0.297	+/-18.0	28.7	pCi/L
Ruthenium-106	U	-28.7	+/-33.9	54.3	pCi/L
Silver-110m	U	4.59	+/-3.40	5.50	pCi/L
Sodium-22	U	3.23	+/-2.71	7.10	pCi/L
Thallium-208	U	3.41	+/-7.30	6.23	pCi/L
Thorium-230	U	-1270	+/-1260	1750	pCi/L
Thorium-234	UI	0.00	+/-200	207	pCi/L
Tin-113	U	-1.69	+/-4.11	7.13	pCi/L
Uranium-235	U	-8.76	+/-24.0	34.8	pCi/L
Uranium-238	UI	0.00	+/-200	207	pCi/L
Yttrium-88	U	-2.68	+/-3.84	6.37	pCi/L
Zinc-65	U	3.65	+/-8.96	14.9	pCi/L
Zirconium-95	U	5.33	+/-8.46	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.921	+/-2.55	4.75	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		18.7	+/-3.40	3.29	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	118	+/-86.4	142	300	pCi/L	MYM1	04/29/14	1010	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 346376024  
Matrix: Ground Water  
Collect Date: 04-APR-14 10:15  
Receive Date: 10-APR-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.15	+/-13.4	23.4		pCi/L		MJH1	04/14/14	0917 1379235	1
Americium-241	U	7.27	+/-23.0	36.5		pCi/L					
Antimony-124	U	8.73	+/-9.26	19.8		pCi/L					
Antimony-125	U	1.83	+/-9.06	16.8		pCi/L					
Barium-133	U	2.83	+/-4.73	7.66		pCi/L					
Barium-140	U	-2.51	+/-7.43	11.5		pCi/L					
Beryllium-7	U	0.572	+/-27.5	50.6		pCi/L					
Bismuth-212	U	-18.7	+/-59.1	84.0		pCi/L					
Bismuth-214		21.8	+/-11.9	12.9		pCi/L					
Cerium-139	U	0.556	+/-2.81	5.09		pCi/L					
Cerium-141	U	-7.37	+/-6.99	9.95		pCi/L					
Cerium-144	U	-3.3	+/-18.7	33.6		pCi/L					
Cesium-134	U	-4.36	+/-3.85	6.10		pCi/L					
Cesium-136	U	0.434	+/-6.36	12.1		pCi/L					
Cesium-137	U	-0.248	+/-4.64	7.45	10.0	pCi/L					
Chromium-51	U	25.6	+/-34.1	62.6		pCi/L					
Cobalt-56	U	0.936	+/-3.81	6.96		pCi/L					
Cobalt-57	U	0.857	+/-2.61	4.49		pCi/L					
Cobalt-58	U	-2.14	+/-3.33	5.58		pCi/L					
Cobalt-60	U	-2.72	+/-3.51	5.84		pCi/L					
Europium-152	U	-4.71	+/-9.97	16.8		pCi/L					
Europium-154	U	4.21	+/-9.69	19.2		pCi/L					
Europium-155	U	-2.14	+/-11.2	18.9		pCi/L					
Iridium-192	U	-1.29	+/-3.44	5.88		pCi/L					
Iron-59	U	1.82	+/-8.03	13.4		pCi/L					
Lead-210	U	-388	+/-813	1210		pCi/L					
Lead-212	U	2.79	+/-8.24	12.2		pCi/L					
Lead-214	U	10.0	+/-12.9	17.0		pCi/L					
Manganese-54	U	-0.117	+/-3.78	6.23		pCi/L					
Mercury-203	U	1.37	+/-3.80	6.06		pCi/L					
Neodymium-147	U	-54.2	+/-35.6	56.0		pCi/L					
Neptunium-239	U	-1.14	+/-27.3	46.2		pCi/L					
Niobium-94	U	0.551	+/-3.11	5.69		pCi/L					
Niobium-95	U	1.88	+/-3.77	7.04		pCi/L					
Potassium-40	U	-2.25	+/-55.7	88.5		pCi/L					
Promethium-144	U	3.59	+/-3.40	6.61		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 346376024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.868	+/-4.16	7.50	pCi/L
Radium-228	U	-8.15	+/-13.4	23.4	pCi/L
Ruthenium-106	U	-25.4	+/-28.5	47.5	pCi/L
Silver-110m	U	-1.9	+/-3.25	5.56	pCi/L
Sodium-22	U	1.24	+/-3.45	6.75	pCi/L
Thallium-208	U	-0.103	+/-4.37	7.40	pCi/L
Thorium-230	U	-1540	+/-1360	2080	pCi/L
Thorium-234	U	51.1	+/-246	284	pCi/L
Tin-113	U	-4.0	+/-4.43	7.15	pCi/L
Uranium-235	U	-28.6	+/-25.2	36.1	pCi/L
Uranium-238	U	51.1	+/-246	284	pCi/L
Yttrium-88	U	3.14	+/-4.30	8.33	pCi/L
Zinc-65	U	7.17	+/-7.46	14.0	pCi/L
Zirconium-95	U	1.62	+/-6.01	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.75	+/-3.73	4.64	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	16.5	+/-3.70	3.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	91.6	+/-84.3	140	300	pCi/L	MYM1	04/29/14	1026	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	346376025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 12:10		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.322	+/-24.8	41.4		pCi/L		MJH1	04/14/14	0926 1379235	1
Americium-241	U	21.3	+/-18.6	29.1		pCi/L					
Antimony-124	U	-2.71	+/-12.9	25.0		pCi/L					
Antimony-125	U	5.35	+/-12.3	22.9		pCi/L					
Barium-133	U	-2.61	+/-6.68	9.92		pCi/L					
Barium-140	U	-0.499	+/-10.7	17.9		pCi/L					
Beryllium-7	U	-7.25	+/-38.8	71.5		pCi/L					
Bismuth-212	U	43.1	+/-77.8	151		pCi/L					
Bismuth-214		42.2	+/-19.7	17.0		pCi/L					
Cerium-139	U	-0.477	+/-3.56	6.44		pCi/L					
Cerium-141	U	2.20	+/-6.47	11.3		pCi/L					
Cerium-144	U	5.60	+/-25.4	44.0		pCi/L					
Cesium-134	U	0.0099	+/-5.37	10.0		pCi/L					
Cesium-136	U	1.69	+/-7.53	15.4		pCi/L					
Cesium-137	U	1.09	+/-7.13	9.54	10.0	pCi/L					
Chromium-51	U	-50.1	+/-47.6	67.0		pCi/L					
Cobalt-56	U	5.13	+/-3.58	9.64		pCi/L					
Cobalt-57	U	-1.41	+/-3.29	5.50		pCi/L					
Cobalt-58	U	-0.96	+/-4.94	8.95		pCi/L					
Cobalt-60	U	1.37	+/-5.63	11.3		pCi/L					
Europium-152	U	11.8	+/-14.5	20.8		pCi/L					
Europium-154	U	6.15	+/-13.3	28.5		pCi/L					
Europium-155	U	-11.5	+/-12.8	20.8		pCi/L					
Iridium-192	U	2.03	+/-4.08	7.65		pCi/L					
Iron-59	U	3.85	+/-10.3	20.8		pCi/L					
Lead-210	U	-258	+/-418	625		pCi/L					
Lead-212	U	6.80	+/-12.8	13.1		pCi/L					
Lead-214		66.0	+/-20.5	31.7		pCi/L					
Manganese-54	U	-3.08	+/-5.61	9.57		pCi/L					
Mercury-203	U	-1.67	+/-4.44	7.74		pCi/L					
Neodymium-147	U	-18.9	+/-40.5	72.4		pCi/L					
Neptunium-239	U	-28	+/-33.9	55.3		pCi/L					
Niobium-94	U	0.696	+/-4.33	8.24		pCi/L					
Niobium-95	U	1.47	+/-5.07	9.72		pCi/L					
Potassium-40	U	42.1	+/-76.9	154		pCi/L					
Promethium-144	U	-1.88	+/-4.81	8.50		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43 Project: WNUC00127  
Sample ID: 346376025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	10.2	+/-6.67	12.0	pCi/L
Radium-228	U	0.322	+/-24.8	41.4	pCi/L
Ruthenium-106	U	-19.2	+/-37.9	67.0	pCi/L
Silver-110m	U	-0.581	+/-5.14	8.17	pCi/L
Sodium-22	U	1.95	+/-4.62	9.87	pCi/L
Thallium-208	U	-1.96	+/-6.39	10.8	pCi/L
Thorium-230	U	-1050	+/-1200	2010	pCi/L
Thorium-234	U	-152	+/-187	276	pCi/L
Tin-113	U	-2.18	+/-5.70	9.81	pCi/L
Uranium-235	U	-3.19	+/-29.5	44.9	pCi/L
Uranium-238	U	-152	+/-187	276	pCi/L
Yttrium-88	U	4.26	+/-5.81	13.5	pCi/L
Zinc-65	U	-6.75	+/-12.4	18.0	pCi/L
Zirconium-95	U	-0.802	+/-8.14	15.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.02	+/-2.15	4.04	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta	U	1.23	+/-2.10	3.64	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	41.5	+/-82.1	141	300	pCi/L	MYM1	04/29/14	1042	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	346376026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 12:03		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.10	+/-19.3	31.0		pCi/L		MJH1	04/14/14	0926 1379235	1
Americium-241	U	-16.2	+/-28.9	51.1		pCi/L					
Antimony-124	U	-1.33	+/-9.22	18.0		pCi/L					
Antimony-125	U	5.13	+/-10.5	19.4		pCi/L					
Barium-133	U	-0.859	+/-4.56	8.06		pCi/L					
Barium-140	U	3.12	+/-8.94	18.1		pCi/L					
Beryllium-7	U	22.1	+/-30.0	58.1		pCi/L					
Bismuth-212	U	13.4	+/-49.8	95.1		pCi/L					
Bismuth-214		29.7	+/-13.1	14.8		pCi/L					
Cerium-139	U	-0.928	+/-3.05	5.18		pCi/L					
Cerium-141	U	-4.12	+/-6.03	10.0		pCi/L					
Cerium-144	U	-0.921	+/-21.2	37.1		pCi/L					
Cesium-134	U	1.81	+/-5.05	8.44		pCi/L					
Cesium-136	U	-1.9	+/-9.28	14.6		pCi/L					
Cesium-137	U	0.329	+/-4.55	7.93	10.0	pCi/L					
Chromium-51	U	4.79	+/-37.8	68.5		pCi/L					
Cobalt-56	U	-0.669	+/-4.18	7.47		pCi/L					
Cobalt-57	U	-1.04	+/-2.89	4.97		pCi/L					
Cobalt-58	U	0.946	+/-4.16	7.80		pCi/L					
Cobalt-60	U	0.609	+/-4.63	8.86		pCi/L					
Europium-152	U	-1.25	+/-10.6	18.8		pCi/L					
Europium-154	U	-1.87	+/-14.5	23.6		pCi/L					
Europium-155	U	16.1	+/-13.9	21.1		pCi/L					
Iridium-192	U	-0.726	+/-3.96	7.01		pCi/L					
Iron-59	U	3.77	+/-5.66	11.8		pCi/L					
Lead-210	U	-134	+/-1520	2320		pCi/L					
Lead-212	U	9.47	+/-9.26	13.9		pCi/L					
Lead-214	UI	0.00	+/-20.3	19.7		pCi/L					
Manganese-54	U	-2.66	+/-4.21	7.05		pCi/L					
Mercury-203	U	0.485	+/-3.74	6.84		pCi/L					
Neodymium-147	U	16.7	+/-43.9	81.1		pCi/L					
Neptunium-239	U	-2.72	+/-29.6	51.9		pCi/L					
Niobium-94	U	-0.195	+/-4.10	7.42		pCi/L					
Niobium-95	U	-0.722	+/-4.49	7.81		pCi/L					
Potassium-40	U	64.7	+/-55.7	90.1		pCi/L					
Promethium-144	U	-0.384	+/-4.05	7.30		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 346376026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.02	+/-5.08	8.11	pCi/L
Radium-228	U	1.10	+/-19.3	31.0	pCi/L
Ruthenium-106	U	-13.6	+/-31.9	56.6	pCi/L
Silver-110m	U	1.05	+/-4.03	7.56	pCi/L
Sodium-22	U	-0.658	+/-5.09	8.32	pCi/L
Thallium-208	U	-0.519	+/-4.79	8.09	pCi/L
Thorium-230	U	-2100	+/-1920	2850	pCi/L
Thorium-234	U	-125	+/-272	449	pCi/L
Tin-113	U	7.58	+/-5.18	8.04	pCi/L
Uranium-235	U	7.91	+/-24.6	39.0	pCi/L
Uranium-238	U	-125	+/-272	449	pCi/L
Yttrium-88	U	-0.0862	+/-4.92	9.61	pCi/L
Zinc-65	U	5.74	+/-9.07	18.3	pCi/L
Zirconium-95	U	3.71	+/-8.18	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.606	+/-1.74	4.22	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		5.79	+/-3.18	4.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	97.4	+/-83.9	139	300	pCi/L	MYM1	04/29/14	1058	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	346376027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-APR-14 10:55		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.5	+/-19.6	31.2		pCi/L		MJH1	04/14/14	1017 1379235	1
Americium-241	U	-2.36	+/-31.6	51.0		pCi/L					
Antimony-124	U	2.80	+/-6.98	15.6		pCi/L					
Antimony-125	U	4.79	+/-9.56	18.0		pCi/L					
Barium-133	U	3.92	+/-3.97	7.34		pCi/L					
Barium-140	U	-2.57	+/-6.50	11.8		pCi/L					
Beryllium-7	U	7.93	+/-28.9	53.7		pCi/L					
Bismuth-212	U	-6.16	+/-53.1	98.0		pCi/L					
Bismuth-214		45.7	+/-19.0	15.0		pCi/L					
Cerium-139	U	1.41	+/-3.35	5.34		pCi/L					
Cerium-141	U	4.53	+/-5.72	10.4		pCi/L					
Cerium-144	U	5.18	+/-19.7	35.0		pCi/L					
Cesium-134	U	2.67	+/-3.92	7.26		pCi/L					
Cesium-136	U	-2.84	+/-7.31	10.9		pCi/L					
Cesium-137	U	-0.979	+/-4.10	7.07	10.0	pCi/L					
Chromium-51	U	-18.3	+/-34.6	52.2		pCi/L					
Cobalt-56	U	-1.34	+/-3.92	7.02		pCi/L					
Cobalt-57	U	-0.362	+/-2.56	4.45		pCi/L					
Cobalt-58	U	-0.23	+/-3.09	5.83		pCi/L					
Cobalt-60	U	1.11	+/-3.39	7.11		pCi/L					
Europium-152	U	3.51	+/-10.8	20.0		pCi/L					
Europium-154	U	-1.01	+/-9.47	18.6		pCi/L					
Europium-155	U	2.43	+/-11.0	19.7		pCi/L					
Iridium-192	U	0.121	+/-3.45	6.29		pCi/L					
Iron-59	U	0.588	+/-8.89	14.5		pCi/L					
Lead-210	U	-535	+/-1310	2320		pCi/L					
Lead-212	U	10.5	+/-9.90	14.1		pCi/L					
Lead-214		43.4	+/-12.8	12.7		pCi/L					
Manganese-54	U	3.28	+/-4.25	7.67		pCi/L					
Mercury-203	U	0.169	+/-4.02	6.47		pCi/L					
Neodymium-147	U	-31.9	+/-34.4	55.5		pCi/L					
Neptunium-239	U	10.8	+/-29.7	53.3		pCi/L					
Niobium-94	U	-0.611	+/-4.10	6.51		pCi/L					
Niobium-95	U	0.890	+/-3.67	7.04		pCi/L					
Potassium-40	U	41.3	+/-50.6	65.3		pCi/L					
Promethium-144	U	-0.943	+/-3.57	6.50		pCi/L					

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47 Project: WNUC00127  
Sample ID: 346376027 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.39	+/-4.34	7.41	pCi/L
Radium-228	U	12.5	+/-19.6	31.2	pCi/L
Ruthenium-106	U	1.38	+/-33.6	60.2	pCi/L
Silver-110m	U	-1.1	+/-3.35	6.10	pCi/L
Sodium-22	U	0.317	+/-3.21	6.54	pCi/L
Thallium-208	U	0.470	+/-4.91	7.18	pCi/L
Thorium-230	U	1920	+/-2060	2990	pCi/L
Thorium-234	U	58.1	+/-359	429	pCi/L
Tin-113	U	-1.75	+/-4.14	7.24	pCi/L
Uranium-235	U	13.5	+/-27.4	40.8	pCi/L
Uranium-238	U	58.1	+/-359	429	pCi/L
Yttrium-88	U	0.0249	+/-4.16	8.24	pCi/L
Zinc-65	U	-4.74	+/-9.37	16.1	pCi/L
Zirconium-95	U	-0.323	+/-6.73	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.349	+/-2.19	4.60	5.00	pCi/L	DXG3	05/05/14	1257	1382544	2
Beta		59.6	+/-6.50	3.69	5.00	pCi/L					
Alpha	U	2.73	+/-2.54	3.61	5.00	pCi/L	DXG3	05/06/14	1124	1382544	3
Beta		63.6	+/-7.22	5.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.5	+/-94.1	166	300	pCi/L	MYM1	04/30/14	2302	1379901	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47  
Sample ID: 346376027

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	346376028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	04-APR-14 11:20		
Receive Date:	10-APR-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.93	+/-19.2	31.0		pCi/L		MJH1	04/15/14	1157 1379235	1
Americium-241	U	3.25	+/-22.5	34.5		pCi/L					
Antimony-124	U	2.26	+/-10.2	20.0		pCi/L					
Antimony-125	U	3.64	+/-9.05	16.9		pCi/L					
Barium-133	U	-5.12	+/-5.12	8.57		pCi/L					
Barium-140	U	-3.06	+/-7.16	12.8		pCi/L					
Beryllium-7	U	14.8	+/-32.8	61.0		pCi/L					
Bismuth-212	U	-30	+/-54.4	91.8		pCi/L					
Bismuth-214		21.8	+/-11.1	15.1		pCi/L					
Cerium-139	U	0.575	+/-3.50	5.99		pCi/L					
Cerium-141	U	3.65	+/-7.44	12.0		pCi/L					
Cerium-144	U	-7.73	+/-23.6	39.7		pCi/L					
Cesium-134	U	0.0818	+/-3.47	6.35		pCi/L					
Cesium-136	U	1.06	+/-8.95	16.9		pCi/L					
Cesium-137	U	2.62	+/-4.00	7.57	10.0	pCi/L					
Chromium-51	U	-40.2	+/-46.5	69.9		pCi/L					
Cobalt-56	U	-2.33	+/-4.18	7.01		pCi/L					
Cobalt-57	U	0.267	+/-3.18	5.45		pCi/L					
Cobalt-58	U	-2.86	+/-4.70	7.83		pCi/L					
Cobalt-60	U	-0.219	+/-4.17	7.79		pCi/L					
Europium-152	U	-5.56	+/-11.5	20.0		pCi/L					
Europium-154	U	-0.721	+/-10.9	20.4		pCi/L					
Europium-155	U	-5.08	+/-13.3	22.4		pCi/L					
Iridium-192	U	1.18	+/-3.87	7.05		pCi/L					
Iron-59	U	1.58	+/-9.51	15.8		pCi/L					
Lead-210	U	313	+/-632	638		pCi/L					
Lead-212	U	2.58	+/-10.9	14.0		pCi/L					
Lead-214	U	-1.57	+/-10.7	16.7		pCi/L					
Manganese-54	U	0.728	+/-3.83	6.97		pCi/L					
Mercury-203	U	0.482	+/-4.24	7.62		pCi/L					
Neodymium-147	U	4.39	+/-48.2	87.1		pCi/L					
Neptunium-239	U	-28.2	+/-33.1	54.3		pCi/L					
Niobium-94	U	-1.84	+/-3.75	6.36		pCi/L					
Niobium-95	U	-0.825	+/-4.02	7.04		pCi/L					
Potassium-40	U	-14.1	+/-62.0	96.1		pCi/L					
Promethium-144	U	2.50	+/-4.09	7.59		pCi/L					



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## Certificate of Analysis

Report Date: May 14, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	346376028	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.381	+/-5.02	9.00	pCi/L
Radium-228	U	-2.93	+/-19.2	31.0	pCi/L
Ruthenium-106	U	-1.16	+/-34.6	61.7	pCi/L
Silver-110m	U	0.476	+/-3.67	6.64	pCi/L
Sodium-22	U	0.095	+/-3.80	7.22	pCi/L
Thallium-208	U	-1.8	+/-8.21	8.42	pCi/L
Thorium-230	U	199	+/-1500	2290	pCi/L
Thorium-234	U	83.8	+/-217	292	pCi/L
Tin-113	U	5.85	+/-8.06	8.80	pCi/L
Uranium-235	U	-0.635	+/-28.7	42.5	pCi/L
Uranium-238	U	83.8	+/-217	292	pCi/L
Yttrium-88	U	-1.5	+/-4.53	8.15	pCi/L
Zinc-65	U	1.94	+/-7.45	12.9	pCi/L
Zirconium-95	U	4.54	+/-7.73	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.02	+/-1.75	3.19	5.00	pCi/L	DXG3	05/05/14	1304	1382544	2
Beta		10.2	+/-3.28	4.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.4	+/-95.0	165	300	pCi/L	MYM1	04/30/14	2318	1379901	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: May 14, 2014

Page 1 of 18

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 346376

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1386260										
QC1203083889	346376010	DUP									
Uranium-233/234		7.65		7.27	pCi/L	5.07		(0%-20%)	HAKB	05/12/14	16:50
		Uncertainty	+/-1.05	+/-1.08							
Uranium-235/236		0.277		0.589	pCi/L	72.1		(0% - 100%)			
		Uncertainty	+/-0.244	+/-0.388							
Uranium-238		3.30		2.98	pCi/L	10.4		(0%-20%)			
		Uncertainty	+/-0.696	+/-0.727							
QC1203083890	LCS										
Uranium-233/234				26.4	pCi/L					05/12/14	16:50
		Uncertainty		+/-1.98							
Uranium-235/236				1.25	pCi/L						
		Uncertainty		+/-0.521							
Uranium-238		27.2		25.6	pCi/L		94.1	(75%-125%)			
		Uncertainty		+/-1.94							
QC1203083888	MB										
Uranium-233/234			U	-0.0217	pCi/L					05/12/14	16:50
		Uncertainty		+/-0.144							
Uranium-235/236			U	0.0258	pCi/L						
		Uncertainty		+/-0.162							
Uranium-238			U	0.0631	pCi/L						
		Uncertainty		+/-0.155							
Rad Gamma Spec											
Batch	1379234										
QC1203065983	346376001	DUP									
Actinium-228		U	8.07	U	-1.87	pCi/L	N/A		N/A	MJH1	04/16/14 14:36
		Uncertainty	+/-23.2		+/-15.6						
Americium-241		U	0.904	U	2.38	pCi/L	N/A		N/A		
		Uncertainty	+/-28.3		+/-12.0						
Antimony-124		U	0.828	U	-0.171	pCi/L	N/A		N/A		
		Uncertainty	+/-10.1		+/-7.33						
Antimony-125		U	-0.631	U	-7.12	pCi/L	N/A		N/A		
		Uncertainty	+/-10.2		+/-9.94						
Barium-133		U	-3.18	U	-0.244	pCi/L	N/A		N/A		
		Uncertainty	+/-5.00		+/-4.21						
Barium-140		U	11.3	U	11.3	pCi/L	N/A		N/A		
		Uncertainty	+/-9.31		+/-7.76						
Beryllium-7		U	-5.16	U	34.1	pCi/L	N/A		N/A		
		Uncertainty	+/-35.5		+/-29.9						
Bismuth-212		U	14.9	U	51.3	pCi/L	N/A		N/A		
		Uncertainty	+/-65.1		+/-49.4						
Bismuth-214		U	14.1	U	2.48	pCi/L	N/A		N/A		

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
	Uncertainty										
		+/-12.3		+/-9.59							
Cerium-139	U	1.06	U	-2.8	pCi/L	N/A		N/A	MJH1	04/16/14	14:36
	Uncertainty	+/-3.50		+/-2.93							
Cerium-141	U	-2.81	U	-2.29	pCi/L	N/A		N/A			
	Uncertainty	+/-8.53		+/-6.35							
Cerium-144	U	-7.7	U	2.20	pCi/L	N/A		N/A			
	Uncertainty	+/-22.6		+/-20.8							
Cesium-134	U	-1.28	U	-0.793	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-4.07							
Cesium-136	U	1.53	U	0.412	pCi/L	N/A		N/A			
	Uncertainty	+/-9.71		+/-7.62							
Cesium-137	U	1.97	U	-0.403	pCi/L	N/A		N/A			
	Uncertainty	+/-3.91		+/-3.93							
Chromium-51	U	-13.9	U	24.1	pCi/L	N/A		N/A			
	Uncertainty	+/-42.6		+/-33.2							
Cobalt-56	U	2.61	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-3.87							
Cobalt-57	U	1.02	U	1.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.06		+/-2.71							
Cobalt-58	U	-2.08	U	-0.328	pCi/L	N/A		N/A			
	Uncertainty	+/-4.04		+/-3.40							
Cobalt-60	U	3.28	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-4.09		+/-4.14							
Europium-152	U	-7.44	U	-2.09	pCi/L	N/A		N/A			
	Uncertainty	+/-12.3		+/-9.72							
Europium-154	U	-3.63	U	-4.05	pCi/L	N/A		N/A			
	Uncertainty	+/-12.7		+/-9.83							
Europium-155	U	-8.4	U	-0.107	pCi/L	N/A		N/A			
	Uncertainty	+/-14.3		+/-12.1							
Iridium-192	U	-4.48	U	1.47	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-3.30							
Iron-59	U	-0.829	U	-1.89	pCi/L	N/A		N/A			
	Uncertainty	+/-7.52		+/-6.95							
Lead-210	U	-39.8	U	-173	pCi/L	N/A		N/A			
	Uncertainty	+/-1030		+/-254							
Lead-212	U	12.3	U	0.963	pCi/L	N/A		N/A			
	Uncertainty	+/-11.7		+/-6.80							
Lead-214	U	-14.6	U	5.13	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-11.8							
Manganese-54	U	4.66	U	0.499	pCi/L	N/A		N/A			
	Uncertainty	+/-4.21		+/-3.59							
Mercury-203	U	-4.38	U	-0.999	pCi/L	N/A		N/A			
	Uncertainty	+/-4.47		+/-3.54							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Neodymium-147	U	-28.8	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-46.5		+/-43.2							
Neptunium-239	U	-10.3	U	9.87	pCi/L	N/A		N/A	MJH1	04/16/14	14:36
	Uncertainty	+/-32.9		+/-25.9							
Niobium-94	U	-4.3	U	-0.831	pCi/L	N/A		N/A			
	Uncertainty	+/-4.77		+/-3.34							
Niobium-95	U	0.320	U	1.64	pCi/L	N/A		N/A			
	Uncertainty	+/-3.98		+/-2.98							
Potassium-40	UI	0.00	U	49.6	pCi/L	N/A		N/A			
	Uncertainty	+/-63.9		+/-70.6							
Promethium-144	U	1.87	U	1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-3.66							
Promethium-146	U	1.98	U	0.864	pCi/L	N/A		N/A			
	Uncertainty	+/-4.93		+/-4.16							
Radium-228	U	8.07	U	-1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-23.2		+/-15.6							
Ruthenium-106	U	11.4	U	9.90	pCi/L	N/A		N/A			
	Uncertainty	+/-35.7		+/-28.5							
Silver-110m	U	0.286	U	1.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.19		+/-4.52							
Sodium-22	U	-1.21	U	-1.57	pCi/L	N/A		N/A			
	Uncertainty	+/-4.47		+/-3.45							
Thallium-208	U	5.89	U	-1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-7.31		+/-4.00							
Thorium-230	U	-2030	U	420	pCi/L	N/A		N/A			
	Uncertainty	+/-1820		+/-924							
Thorium-234	U	82.0	U	30.2	pCi/L	N/A		N/A			
	Uncertainty	+/-371		+/-153							
Tin-113	U	1.74	U	-0.398	pCi/L	N/A		N/A			
	Uncertainty	+/-4.83		+/-4.58							
Uranium-235	U	1.97	U	3.62	pCi/L	N/A		N/A			
	Uncertainty	+/-30.2		+/-23.5							
Uranium-238	U	82.0	U	30.2	pCi/L	N/A		N/A			
	Uncertainty	+/-371		+/-153							
Yttrium-88	U	-0.109	U	-0.909	pCi/L	N/A		N/A			
	Uncertainty	+/-4.99		+/-3.52							
Zinc-65	U	-4.01	U	3.70	pCi/L	N/A		N/A			
	Uncertainty	+/-8.02		+/-6.92							
Zirconium-95	U	4.10	U	0.338	pCi/L	N/A		N/A			
	Uncertainty	+/-7.39		+/-6.25							
QC1203065984	LCS										
Actinium-228			U	117	pCi/L					04/15/14	14:39
	Uncertainty			+/-1080							
Americium-241	1.11E+05			1.17E+05	pCi/L		106	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
				+/-3190							
Antimony-124			U	-70.9	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-224							
Antimony-125			U	-67.1	pCi/L						
	Uncertainty			+/-554							
Barium-133			U	8.78	pCi/L						
	Uncertainty			+/-218							
Barium-140			U	86.4	pCi/L						
	Uncertainty			+/-140							
Beryllium-7			U	-1140	pCi/L						
	Uncertainty			+/-1760							
Bismuth-212			U	856	pCi/L						
	Uncertainty			+/-2850							
Bismuth-214			U	-94.8	pCi/L						
	Uncertainty			+/-363							
Cerium-139				1570	pCi/L						
	Uncertainty			+/-163							
Cerium-141			U	-21.9	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	625	pCi/L						
	Uncertainty			+/-910							
Cesium-134			U	37.1	pCi/L						
	Uncertainty			+/-256							
Cesium-136			U	73.2	pCi/L						
	Uncertainty			+/-411							
Cesium-137	45200			45800	pCi/L		101	(75%-125%)			
	Uncertainty			+/-839							
Chromium-51			U	-1010	pCi/L						
	Uncertainty			+/-1420							
Cobalt-56			U	44.8	pCi/L						
	Uncertainty			+/-253							
Cobalt-57				5840	pCi/L						
	Uncertainty			+/-247							
Cobalt-58			U	-10.4	pCi/L						
	Uncertainty			+/-238							
Cobalt-60	57800			58100	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1100							
Europium-152			U	-76.8	pCi/L						
	Uncertainty			+/-506							
Europium-154			U	-291	pCi/L						
	Uncertainty			+/-380							
Europium-155			U	-372	pCi/L						
	Uncertainty			+/-482							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Iridium-192			U	96.0	pCi/L						
	Uncertainty			+/-157							
Iron-59			U	-56.7	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-555							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-76600							
Lead-212			U	-23.6	pCi/L						
	Uncertainty			+/-270							
Lead-214			U	-41.4	pCi/L						
	Uncertainty			+/-376							
Manganese-54			U	-231	pCi/L						
	Uncertainty			+/-244							
Mercury-203			U	-52.9	pCi/L						
	Uncertainty			+/-156							
Neodymium-147			U	-166	pCi/L						
	Uncertainty			+/-1460							
Neptunium-239			U	-273	pCi/L						
	Uncertainty			+/-1410							
Niobium-94			U	35.0	pCi/L						
	Uncertainty			+/-189							
Niobium-95			U	259	pCi/L						
	Uncertainty			+/-213							
Potassium-40			U	-720	pCi/L						
	Uncertainty			+/-985							
Promethium-144			U	55.2	pCi/L						
	Uncertainty			+/-212							
Promethium-146			U	63.9	pCi/L						
	Uncertainty			+/-316							
Radium-228			U	117	pCi/L						
	Uncertainty			+/-1080							
Ruthenium-106			U	765	pCi/L						
	Uncertainty			+/-1900							
Silver-110m				1600	pCi/L						
	Uncertainty			+/-265							
Sodium-22			U	-88.1	pCi/L						
	Uncertainty			+/-132							
Thallium-208			U	49.8	pCi/L						
	Uncertainty			+/-186							
Thorium-230			U	59000	pCi/L						
	Uncertainty			+/-66100							
Thorium-234			U	-20300	pCi/L						
	Uncertainty			+/-8380							
Tin-113				1210	pCi/L						
	Uncertainty			+/-492							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379234										
Uranium-235			U	-420	pCi/L						
	Uncertainty			+/-832							
Uranium-238			U	-20300	pCi/L				MJH1	04/15/14	14:39
	Uncertainty			+/-8380							
Yttrium-88				1480	pCi/L						
	Uncertainty			+/-264							
Zinc-65				20200	pCi/L						
	Uncertainty			+/-1300							
Zirconium-95			U	1.65	pCi/L						
	Uncertainty			+/-376							
QC1203065982	MB										
Actinium-228			U	-9.42	pCi/L					04/16/14	14:36
	Uncertainty			+/-23.6							
Americium-241			U	7.18	pCi/L						
	Uncertainty			+/-5.64							
Antimony-124			U	-6.45	pCi/L						
	Uncertainty			+/-10.7							
Antimony-125			U	-1.92	pCi/L						
	Uncertainty			+/-9.70							
Barium-133			U	-0.566	pCi/L						
	Uncertainty			+/-4.41							
Barium-140			U	0.201	pCi/L						
	Uncertainty			+/-6.51							
Beryllium-7			U	28.8	pCi/L						
	Uncertainty			+/-32.0							
Bismuth-212			U	48.9	pCi/L						
	Uncertainty			+/-69.7							
Bismuth-214			U	3.79	pCi/L						
	Uncertainty			+/-13.5							
Cerium-139			U	-2.3	pCi/L						
	Uncertainty			+/-2.68							
Cerium-141			U	4.71	pCi/L						
	Uncertainty			+/-6.69							
Cerium-144			U	3.21	pCi/L						
	Uncertainty			+/-16.4							
Cesium-134			U	-0.648	pCi/L						
	Uncertainty			+/-4.68							
Cesium-136			U	-1.82	pCi/L						
	Uncertainty			+/-7.38							
Cesium-137			U	2.92	pCi/L						
	Uncertainty			+/-4.49							
Chromium-51			U	7.05	pCi/L						
	Uncertainty			+/-29.4							
Cobalt-56			U	-0.769	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch		1379234									
				+/-4.57							
Cobalt-57			U	0.343	pCi/L				MJH1	04/16/14	14:36
	Uncertainty			+/-2.01							
Cobalt-58			U	0.243	pCi/L						
	Uncertainty			+/-4.13							
Cobalt-60			U	-1.17	pCi/L						
	Uncertainty			+/-4.08							
Europium-152			U	-1.56	pCi/L						
	Uncertainty			+/-9.66							
Europium-154			U	-3.39	pCi/L						
	Uncertainty			+/-14.5							
Europium-155			U	1.23	pCi/L						
	Uncertainty			+/-9.27							
Iridium-192			U	-0.265	pCi/L						
	Uncertainty			+/-3.12							
Iron-59			U	4.46	pCi/L						
	Uncertainty			+/-8.81							
Lead-210			U	-28	pCi/L						
	Uncertainty			+/-91.1							
Lead-212			U	1.27	pCi/L						
	Uncertainty			+/-8.23							
Lead-214			U	0.238	pCi/L						
	Uncertainty			+/-8.43							
Manganese-54			U	1.49	pCi/L						
	Uncertainty			+/-4.06							
Mercury-203			U	-0.0579	pCi/L						
	Uncertainty			+/-3.31							
Neodymium-147			U	19.0	pCi/L						
	Uncertainty			+/-32.0							
Neptunium-239			U	5.26	pCi/L						
	Uncertainty			+/-21.3							
Niobium-94			U	-1.9	pCi/L						
	Uncertainty			+/-4.49							
Niobium-95			U	3.53	pCi/L						
	Uncertainty			+/-4.63							
Potassium-40			U	6.31	pCi/L						
	Uncertainty			+/-58.2							
Promethium-144			U	0.417	pCi/L						
	Uncertainty			+/-4.51							
Promethium-146			U	2.18	pCi/L						
	Uncertainty			+/-4.72							
Radium-228			U	-9.42	pCi/L						
	Uncertainty			+/-23.6							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1379234										
Ruthenium-106			U	-18.8	pCi/L						
	Uncertainty			+/-35.8							
Silver-110m			U	-0.947	pCi/L				MJH1	04/16/14	14:36
	Uncertainty			+/-4.68							
Sodium-22			U	-0.263	pCi/L						
	Uncertainty			+/-4.94							
Thallium-208			U	-2.3	pCi/L						
	Uncertainty			+/-5.71							
Thorium-230			U	-120	pCi/L						
	Uncertainty			+/-482							
Thorium-234			U	-39	pCi/L						
	Uncertainty			+/-79.7							
Tin-113			U	0.740	pCi/L						
	Uncertainty			+/-4.84							
Uranium-235			U	18.8	pCi/L						
	Uncertainty			+/-26.7							
Uranium-238			U	-39	pCi/L						
	Uncertainty			+/-79.7							
Yttrium-88			U	3.16	pCi/L						
	Uncertainty			+/-5.05							
Zinc-65			U	-10.9	pCi/L						
	Uncertainty			+/-10.2							
Zirconium-95			U	0.329	pCi/L						
	Uncertainty			+/-8.33							
Batch	1379235										
QC1203065986 346376021 DUP											
Actinium-228	U	1.45	U	0.584	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-23.9		+/-19.8							
Americium-241	U	-12	U	25.1	pCi/L	N/A		N/A			
	Uncertainty	+/-18.9		+/-29.9							
Antimony-124	U	2.82	U	1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-6.62		+/-10.4							
Antimony-125	U	-1.91	U	0.535	pCi/L	N/A		N/A			
	Uncertainty	+/-10.2		+/-9.47							
Barium-133	U	-2.0	U	3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-4.36		+/-4.95							
Barium-140	U	2.81	U	1.69	pCi/L	N/A		N/A			
	Uncertainty	+/-5.83		+/-8.11							
Beryllium-7	U	-21.5	U	27.6	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-32.2							
Bismuth-212	U	-40.4	U	8.24	pCi/L	N/A		N/A			
	Uncertainty	+/-64.4		+/-47.3							
Bismuth-214		15.9	U	6.34	pCi/L	25.5		(0% - 100%)			
	Uncertainty	+/-14.5		+/-12.6							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Cerium-139	U	-2.33	U	0.181	pCi/L	N/A		N/A			
	Uncertainty	+/-3.67		+/-3.39							
Cerium-141	U	1.98	U	3.28	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-7.50		+/-5.91							
Cerium-144	U	10.2	U	-7.66	pCi/L	N/A		N/A			
	Uncertainty	+/-19.1		+/-21.5							
Cesium-134	U	1.44	U	0.0559	pCi/L	N/A		N/A			
	Uncertainty	+/-3.55		+/-3.77							
Cesium-136	U	2.78	U	3.75	pCi/L	N/A		N/A			
	Uncertainty	+/-6.91		+/-6.69							
Cesium-137	U	1.40	U	-2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-3.43		+/-4.31							
Chromium-51	U	12.8	U	-6.21	pCi/L	N/A		N/A			
	Uncertainty	+/-29.6		+/-36.6							
Cobalt-56	U	2.22	U	3.07	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-4.28							
Cobalt-57	U	-0.293	U	0.319	pCi/L	N/A		N/A			
	Uncertainty	+/-2.50		+/-2.68							
Cobalt-58	U	2.89	U	-1.8	pCi/L	N/A		N/A			
	Uncertainty	+/-3.48		+/-4.46							
Cobalt-60	U	3.41	U	2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-4.10							
Europium-152	U	1.95	U	6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-11.2		+/-10.1							
Europium-154	U	-4.87	U	-3.45	pCi/L	N/A		N/A			
	Uncertainty	+/-9.23		+/-11.0							
Europium-155	U	11.5	U	-10.4	pCi/L	N/A		N/A			
	Uncertainty	+/-10.7		+/-10.5							
Iridium-192	U	-0.24	U	1.09	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-3.61							
Iron-59	U	4.41	U	-1.05	pCi/L	N/A		N/A			
	Uncertainty	+/-7.16		+/-6.72							
Lead-210	U	560	U	687	pCi/L	N/A		N/A			
	Uncertainty	+/-740		+/-1250							
Lead-212	U	9.09	U	2.12	pCi/L	N/A		N/A			
	Uncertainty	+/-7.58		+/-8.17							
Lead-214	UI	0.00	U	9.12	pCi/L	N/A		N/A			
	Uncertainty	+/-13.9		+/-11.4							
Manganese-54	U	-0.505	U	-1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-3.05		+/-3.71							
Mercury-203	U	-1.05	U	-1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-4.24		+/-3.57							
Neodymium-147	U	1.44	U	-10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-39.8		+/-48.0							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Neptunium-239	U	0.739	U	-11.7	pCi/L	N/A		N/A			
	Uncertainty	+/-26.5		+/-26.7							
Niobium-94	U	1.30	U	1.99	pCi/L	N/A		N/A	MJH1	04/15/14	14:16
	Uncertainty	+/-2.99		+/-3.55							
Niobium-95	U	2.28	U	-5.29	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-3.91							
Potassium-40	U	-11.9	U	4.72	pCi/L	N/A		N/A			
	Uncertainty	+/-50.8		+/-54.2							
Promethium-144	U	-0.515	U	-2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-3.51							
Promethium-146	U	1.39	U	-1.76	pCi/L	N/A		N/A			
	Uncertainty	+/-4.09		+/-4.11							
Radium-228	U	1.45	U	0.584	pCi/L	N/A		N/A			
	Uncertainty	+/-23.9		+/-19.8							
Ruthenium-106	U	-14	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-30.1		+/-35.9							
Silver-110m	U	0.655	U	2.96	pCi/L	N/A		N/A			
	Uncertainty	+/-3.00		+/-3.40							
Sodium-22	U	-3.1	U	0.0971	pCi/L	N/A		N/A			
	Uncertainty	+/-3.44		+/-3.67							
Thallium-208	U	0.474	U	4.79	pCi/L	N/A		N/A			
	Uncertainty	+/-5.64		+/-5.67							
Thorium-230	U	1510	U	259	pCi/L	N/A		N/A			
	Uncertainty	+/-2040		+/-2210							
Thorium-234	U	-35.7	U	124	pCi/L	N/A		N/A			
	Uncertainty	+/-223		+/-327							
Tin-113	U	0.440	U	0.0283	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-4.65							
Uranium-235	U	7.03	U	4.54	pCi/L	N/A		N/A			
	Uncertainty	+/-26.6		+/-26.2							
Uranium-238	U	-35.7	U	124	pCi/L	N/A		N/A			
	Uncertainty	+/-223		+/-327							
Yttrium-88	U	3.56	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-4.11		+/-4.05							
Zinc-65	U	-3.75	U	-4.07	pCi/L	N/A		N/A			
	Uncertainty	+/-7.56		+/-8.90							
Zirconium-95	U	2.10	U	-3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-5.72		+/-6.89							
QC1203065987	LCS										
Actinium-228			U	-89.8	pCi/L					04/15/14	13:55
	Uncertainty			+/-1200							
Americium-241	1.11E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-2660							
Antimony-124			U	124	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1379235										
Antimony-125	Uncertainty		U	+/-219	pCi/L				MJH1	04/15/14	13:55
				150							
Barium-133	Uncertainty		U	+/-613	pCi/L						
				-138							
Barium-140	Uncertainty		U	+/-255	pCi/L						
				35.5							
Beryllium-7	Uncertainty		U	+/-150	pCi/L						
				-1070							
Bismuth-212	Uncertainty		U	+/-1850	pCi/L						
				1520							
Bismuth-214	Uncertainty		U	+/-2860	pCi/L						
				-162							
Cerium-139	Uncertainty			+/-407	pCi/L						
				1370							
Cerium-141	Uncertainty		U	+/-214	pCi/L						
				9.21							
Cerium-144	Uncertainty		U	+/-245	pCi/L						
				-448							
Cesium-134	Uncertainty		U	+/-1150	pCi/L						
				45.0							
Cesium-136	Uncertainty		U	+/-297	pCi/L						
				-443							
Cesium-137	Uncertainty			+/-451	pCi/L		103	(75%-125%)			
				46700							
Chromium-51	Uncertainty		U	+/-949	pCi/L						
				92.1							
Cobalt-56	Uncertainty		U	+/-1610	pCi/L						
				94.9							
Cobalt-57	Uncertainty			+/-285	pCi/L						
				5730							
Cobalt-58	Uncertainty		U	+/-222	pCi/L						
				8.55							
Cobalt-60	Uncertainty			+/-255	pCi/L		103	(75%-125%)			
				59400							
Europium-152	Uncertainty		U	+/-1220	pCi/L						
				163							
Europium-154	Uncertainty		U	+/-576	pCi/L						
				-100							
Europium-155	Uncertainty		U	+/-419	pCi/L						
				268							
Iridium-192	Uncertainty		U	+/-590	pCi/L						
				137							
	Uncertainty			+/-182							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Iron-59			U	254	pCi/L						
	Uncertainty			+/-591							
Lead-210				1.46E+06	pCi/L				MJH1	04/15/14	13:55
	Uncertainty			+/-99500							
Lead-212			U	217	pCi/L						
	Uncertainty			+/-308							
Lead-214			U	218	pCi/L						
	Uncertainty			+/-436							
Manganese-54			U	-42	pCi/L						
	Uncertainty			+/-265							
Mercury-203			U	-40.2	pCi/L						
	Uncertainty			+/-178							
Neodymium-147			U	771	pCi/L						
	Uncertainty			+/-1670							
Neptunium-239			U	-755	pCi/L						
	Uncertainty			+/-1710							
Niobium-94			U	37.8	pCi/L						
	Uncertainty			+/-201							
Niobium-95			U	154	pCi/L						
	Uncertainty			+/-238							
Potassium-40			U	808	pCi/L						
	Uncertainty			+/-1440							
Promethium-144			U	15.2	pCi/L						
	Uncertainty			+/-205							
Promethium-146			U	-169	pCi/L						
	Uncertainty			+/-305							
Radium-228			U	-89.8	pCi/L						
	Uncertainty			+/-1200							
Ruthenium-106			U	-353	pCi/L						
	Uncertainty			+/-1900							
Silver-110m				1790	pCi/L						
	Uncertainty			+/-293							
Sodium-22			U	-44.2	pCi/L						
	Uncertainty			+/-146							
Thallium-208			U	-70.9	pCi/L						
	Uncertainty			+/-209							
Thorium-230				2.06E+05	pCi/L						
	Uncertainty			+/-87800							
Thorium-234			U	-19600	pCi/L						
	Uncertainty			+/-10400							
Tin-113				1280	pCi/L						
	Uncertainty			+/-414							
Uranium-235			U	444	pCi/L						
	Uncertainty			+/-989							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Uranium-238			U	-19600	pCi/L						
	Uncertainty			+/-10400							
Yttrium-88				1540	pCi/L				MJH1	04/15/14	13:55
	Uncertainty			+/-272							
Zinc-65				19500	pCi/L						
	Uncertainty			+/-1530							
Zirconium-95			U	111	pCi/L						
	Uncertainty			+/-414							
QC1203065985	MB										
Actinium-228			U	1.24	pCi/L					04/15/14	14:16
	Uncertainty			+/-16.3							
Americium-241			U	-10	pCi/L						
	Uncertainty			+/-29.5							
Antimony-124			U	-0.752	pCi/L						
	Uncertainty			+/-7.96							
Antimony-125			U	-6.31	pCi/L						
	Uncertainty			+/-9.32							
Barium-133			U	-3.42	pCi/L						
	Uncertainty			+/-4.38							
Barium-140			U	-3.9	pCi/L						
	Uncertainty			+/-5.23							
Beryllium-7			U	12.2	pCi/L						
	Uncertainty			+/-31.3							
Bismuth-212			U	15.8	pCi/L						
	Uncertainty			+/-58.8							
Bismuth-214			U	2.00	pCi/L						
	Uncertainty			+/-9.90							
Cerium-139			U	1.22	pCi/L						
	Uncertainty			+/-2.87							
Cerium-141			U	2.87	pCi/L						
	Uncertainty			+/-8.53							
Cerium-144			U	13.5	pCi/L						
	Uncertainty			+/-18.7							
Cesium-134			U	4.37	pCi/L						
	Uncertainty			+/-3.85							
Cesium-136			U	3.50	pCi/L						
	Uncertainty			+/-5.67							
Cesium-137			U	-0.465	pCi/L						
	Uncertainty			+/-3.38							
Chromium-51			U	2.48	pCi/L						
	Uncertainty			+/-29.2							
Cobalt-56			U	-0.429	pCi/L						
	Uncertainty			+/-3.61							
Cobalt-57			U	-0.203	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Cobalt-58				+/-2.60							
			U	1.61	pCi/L				MJH1	04/15/14	14:16
Cobalt-60	Uncertainty			+/-3.45							
			U	-0.533	pCi/L						
Europium-152	Uncertainty			+/-3.80							
			U	-2.5	pCi/L						
Europium-154	Uncertainty			+/-11.3							
			U	9.31	pCi/L						
Europium-155	Uncertainty			+/-11.0							
			U	4.01	pCi/L						
Iridium-192	Uncertainty			+/-10.1							
			U	-0.742	pCi/L						
Iron-59	Uncertainty			+/-3.33							
			U	-3.72	pCi/L						
Lead-210	Uncertainty			+/-6.66							
			U	331	pCi/L						
Lead-212	Uncertainty			+/-1020							
			U	4.29	pCi/L						
Lead-214	Uncertainty			+/-14.2							
			U	4.83	pCi/L						
Manganese-54	Uncertainty			+/-9.97							
			U	-2.54	pCi/L						
Mercury-203	Uncertainty			+/-3.62							
			U	2.24	pCi/L						
Neodymium-147	Uncertainty			+/-3.47							
			U	-12.2	pCi/L						
Neptunium-239	Uncertainty			+/-26.9							
			U	-30.7	pCi/L						
Niobium-94	Uncertainty			+/-28.1							
			U	-0.96	pCi/L						
Niobium-95	Uncertainty			+/-3.74							
			U	0.852	pCi/L						
Potassium-40	Uncertainty			+/-3.33							
			U	5.75	pCi/L						
Promethium-144	Uncertainty			+/-55.8							
			U	-1.05	pCi/L						
Promethium-146	Uncertainty			+/-3.57							
			U	1.40	pCi/L						
Radium-228	Uncertainty			+/-4.05							
			U	1.24	pCi/L						
Ruthenium-106	Uncertainty			+/-16.3							
			U	-26.3	pCi/L						
	Uncertainty			+/-31.5							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1379235										
Silver-110m			U	-0.344	pCi/L						
	Uncertainty			+/-3.11							
Sodium-22			U	2.85	pCi/L				MJH1	04/15/14	14:16
	Uncertainty			+/-3.89							
Thallium-208			U	-2.5	pCi/L						
	Uncertainty			+/-4.81							
Thorium-230			U	1570	pCi/L						
	Uncertainty			+/-2000							
Thorium-234			U	210	pCi/L						
	Uncertainty			+/-380							
Tin-113			U	-2.27	pCi/L						
	Uncertainty			+/-4.11							
Uranium-235			U	11.7	pCi/L						
	Uncertainty			+/-34.8							
Uranium-238			U	210	pCi/L						
	Uncertainty			+/-380							
Yttrium-88			U	0.728	pCi/L						
	Uncertainty			+/-3.24							
Zinc-65			U	2.55	pCi/L						
	Uncertainty			+/-6.74							
Zirconium-95			U	0.827	pCi/L						
	Uncertainty			+/-7.30							
<b>Rad Gas Flow</b>											
Batch	1382543										
QC1203074576	346376003	DUP									
Alpha		5.23		4.28	pCi/L	20.0		(0% - 100%)	DXG3	05/05/14	17:46
	Uncertainty	+/-1.93		+/-1.71							
Alpha	U	3.85	U	2.20	pCi/L	N/A		N/A		05/06/14	12:07
	Uncertainty	+/-3.26		+/-2.85							
Beta		127		121	pCi/L	4.77		(0%-20%)		05/05/14	17:46
	Uncertainty	+/-3.68		+/-3.38							
Beta		120		110	pCi/L	8.86		(0%-20%)		05/06/14	12:07
	Uncertainty	+/-6.38		+/-7.01							
QC1203074579	LCS										
Alpha		123		136	pCi/L		110	(75%-125%)		05/06/14	07:21
	Uncertainty			+/-13.1							
Beta		454		542	pCi/L		119	(75%-125%)			
	Uncertainty			+/-20.2							
QC1203074575	MB										
Alpha			U	-0.204	pCi/L					05/06/14	07:21
	Uncertainty			+/-2.03							
Beta			U	1.98	pCi/L						
	Uncertainty			+/-2.54							
QC1203074577	346376003	MS									
Alpha		494	5.23	557	pCi/L		112	(75%-125%)		05/07/14	12:15



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1382543										
		Uncertainty									
			+/-1.93	+/-59.5							
Beta	1820	127		2120	pCi/L		106	(75%-125%)	DXG3	05/07/14	12:15
		Uncertainty	+/-3.68	+/-74.6							
QC1203074578	346376003	MSD									
Alpha	494	5.23		616	pCi/L	10.0	124	(0%-20%)		05/06/14	07:21
		Uncertainty	+/-1.93	+/-63.2							
Beta	1820	127		2110	pCi/L	0.543	110	(0%-20%)			
		Uncertainty	+/-3.68	+/-74.6							
Batch	1382544										
QC1203074584	346376023	DUP									
Alpha		U	0.921	U	1.79	pCi/L	N/A		N/A	DXG3	05/05/14 12:57
		Uncertainty	+/-2.55	+/-2.74							
Beta			18.7		19.3	pCi/L	3.04	(0%-20%)			
		Uncertainty	+/-3.40	+/-3.33							
QC1203074587	LCS										
Alpha	123				140	pCi/L		114	(75%-125%)		05/06/14 11:24
		Uncertainty			+/-13.6						
Beta	454				557	pCi/L		123	(75%-125%)		
		Uncertainty			+/-19.4						
QC1203074583	MB										
Alpha			U		1.65	pCi/L					05/05/14 13:04
		Uncertainty			+/-1.94						
Beta			U		2.56	pCi/L					
		Uncertainty			+/-2.69						
QC1203074585	346376023	MS									
Alpha	494	U	0.921		527	pCi/L		107	(75%-125%)		05/06/14 16:15
		Uncertainty	+/-2.55	+/-56.7							
Beta	1820		18.7		2240	pCi/L		123	(75%-125%)		
		Uncertainty	+/-3.40	+/-76.8							
QC1203074586	346376023	MSD									
Alpha	494	U	0.921		526	pCi/L	0.247	106	(0%-20%)		05/06/14 11:24
		Uncertainty	+/-2.55	+/-54.1							
Beta	1820		18.7		2230	pCi/L	0.799	122	(0%-20%)		
		Uncertainty	+/-3.40	+/-77.0							
<b>Rad Liquid Scintillation</b>											
Batch	1379900										
QC1203067686	346376003	DUP									
Technetium-99			299	U	162	pCi/L	0.00	(0% - 100%)	MYM1	04/21/14	12:25
		Uncertainty	+/-109		+/-123						
QC1203067687	LCS										
Technetium-99	4340				4180	pCi/L		96.2	(75%-125%)		04/21/14 12:42
		Uncertainty			+/-239						
QC1203067685	MB										
Technetium-99			U		54.6	pCi/L					04/21/14 12:09
		Uncertainty			+/-117						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1379901										
QC1203067689	346376022	DUP									
Technetium-99		U	50.9	144	pCi/L	95.4		(0% - 100%)	MYM1	04/29/14	12:03
		Uncertainty	+/-82.4	+/-87.2							
QC1203067690	LCS										
Technetium-99		4340		4250	pCi/L		97.7	(75%-125%)		04/29/14	12:19
		Uncertainty		+/-208							
QC1203067688	MB										
Technetium-99			U	-69.4	pCi/L					04/30/14	23:34
		Uncertainty		+/-92.7							
Batch	1382434										
QC1203074276	346376003	DUP									
Technetium-99			299	230	pCi/L	26.3		(0% - 100%)	MYM1	04/29/14	09:47
		Uncertainty	+/-109	+/-106							
QC1203074277	LCS										
Technetium-99		4340		4130	pCi/L		95	(75%-125%)		04/29/14	10:03
		Uncertainty		+/-217							
QC1203074275	MB										
Technetium-99			U	-0.637	pCi/L					04/29/14	09:31
		Uncertainty		+/-100							

### 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 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, or LOD.

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## QC Summary

Workorder: 346376

Page 18 of 18

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.

^ 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 14 May 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122013-11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	July 14, 2014			Casing Diameter: 2 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: Y - N
Facility Name	Westinghouse CNF			Protective Abutment: Y - N	Integrity Satisfactory: Y - N
Well ID #	KV-2			Well Yield: Low - Mod - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	31.25				
Depth To Groundwater (DGW) =	18.06				
Length Of Water Column (LWC) =	13.19				
1 Casing Volume (OCV) = LWC x	0.133			gal. = Standard Evacuation Volume	
3 Casing Volumes =	42.66			gal.	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	(TB) SSB WW GP Other				
Method of Sample Collection	(TB) SSB WW GP Other				

Evacuation and Collection Methods  
 TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 ft	2.2	4.4	6.6	Well Sample Time: 0946
TIME (24 HOUR SYSTEM)	0928	0932	0935	0938	Remarks:
pH (SU)	4.58	4.65	4.65	4.67	
WATER TEMPERATURE (°C)	28.1	26.9	26.5	26.0	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	367.9	337.7	333.1	335.5	
TURBIDITY	7.58	41.9	52.6	137	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>July 14, 2014</b>	
Field Personnel	<b>BTF</b>		
Facility Name	<b>Westinghouse CNF</b>		
Well ID #	<b>W-26</b>		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	<b>32.00</b>		
Depth To Groundwater (DGW) =	<b>25.72</b>		
Length Of Water Column (LWC) =	<b>6.28</b>		
1 Casing Volume (OCV) = LWC x 0.163	<b>= 1.0</b>		gal.
3 Casing Volumes =	<b>3.0</b>		gal. = Standard Evacuation Volume
Total Volume of Water Removed =			
Method of Well Evacuation	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW    GP    Other _____		
Method of Sample Collection	<input checked="" type="radio"/> TB SSB <input type="radio"/> WW    GP    Other _____		

**Evacuation and Collection Methods**

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	Well Sample Time: <b>1020</b>
TIME (24 HOUR SYSTEM)	<b>1011</b>	<b>1013</b>	<b>1015</b>	Remarks:
pH (SU)	<b>5.44</b>	<b>6.05</b>	<b>5.40</b>	
WATER TEMPERATURE (°C.)	<b>36</b>	<b>28.8</b>	<b>28.6</b>	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	<b>184.5</b>	<b>171.6</b>	<b>172.2</b>	
TURBIDITY	<b>23.3</b>	<b>26.9</b>	<b>35.6</b>	
ODOR (SUBJECTIVE)**	<b>1</b>	<b>1</b>	<b>1</b>	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	July 14, 2014		
Field Personnel	BTF		
Facility Name	Westinghouse CNF		
Well ID #	M-41		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	27.05		
Depth To Groundwater (DGW) =	15.57		
Length Of Water Column (LWC) =	11.48		
1 Casing Volume (OCV) = LWC x	0.83	= 1.9	gal.
3 Casing Volumes =	5.7	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	SSB	WW	GP Other
Method of Sample Collection	SSB	WW	GP Other

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1 <sup>st</sup>	1.9	3.8	5.7	Well Sample Time: 1005
TIME (24 HOUR SYSTEM)	0952	0956	0959	1003	Remarks:
pH (SU)	5.92	6.00	5.75	5.90	
WATER TEMPERATURE (°C.)	30.5	30.0	29.5	29.1	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	562	615	585	566	
TURBIDITY	16.9	38.0	22.3	31.4	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	July 14, 2014			Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	BTF			Guard Pipe: PVC - Metal - No	Locking Cap: (Y) - N
Facility Name	Westinghouse CNF			Protective Abutment: (Y) - N	Integrity Satisfactory: (Y) - N
Well ID #	11-48			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	44.06				
Depth To Groundwater (DGW) =	26.78				
Length Of Water Column (LWC) =	17.22				
1 Casing Volume (OCV) = LWC x	0.163 0.652 = 11.2			gal.	
3 Casing Volumes =	33.7			gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation	TB	SSB	WW	(GP)	Other
Method of Sample Collection	(TB)	SSB	WW	GP	Other

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY	ODOR (SUBJECTIVE)**
1st	11.2	15				
1033	1037	1040				
5.84	5.72	5.79				
29.7	29.4	28.6				
133.5	127.9	127.9				
37	28.4	22.2				
1	1	1				

Well Sample Time: 1045  
 Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PG14018  
Date Completed: 07/31/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* PG14018 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	07/14/2014 0940	07/14/2014
002	W-26	Aqueous	07/14/2014 1020	07/14/2014
003	MW-41	Aqueous	07/14/2014 1005	07/14/2014
004	W-48	Aqueous	07/14/2014 1045	07/14/2014

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: PG14018  
Project Name: Annual GWM  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	120		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	5.7		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	150		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	22		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.2		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	22

(6 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-001		
Description: RW-2			Matrix: Aqueous		
Date Sampled: 07/14/2014 0940			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 0938	BTF		
1		(Specific Con) 120.1	1	07/14/2014 0938	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 0938	BTF		
1		(Water level )	1	07/14/2014 0938	BTF		
1		(Well Depth)	1	07/14/2014 0938	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.67			su	1
Specific Conductance @ 25° C - Field		120.1	336		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	26.0			° C	1
Water level depth from top of casing		No Method	18.06			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2235	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2235	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.7		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1501	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/14/2014 0940				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1501	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		72	41-144
2-Fluorobiphenyl		91	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		97	38-127
Phenol-d5		99	28-128
Terphenyl-d14		72	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-002		
Description: W-26			Matrix: Aqueous		
Date Sampled: 07/14/2014 1020			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1017	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1017	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1017	BTF		
1		(Water level )	1	07/14/2014 1017	BTF		
1		(Well Depth)	1	07/14/2014 1017	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.83			su	1
Specific Conductance @ 25° C - Field		120.1	168		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	28.1			° C	1
Water level depth from top of casing		No Method	25.72			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2014 2212	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2014 2212	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1614	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/14/2014 1020				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1614	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		75	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		90	24-127
Nitrobenzene-d5		97	38-127
Phenol-d5		97	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-003		
Description: MW-41			Matrix: Aqueous		
Date Sampled: 07/14/2014 1005			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1003	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1003	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1003	BTF		
1		(Water level )	1	07/14/2014 1003	BTF		
1		(Well Depth)	1	07/14/2014 1003	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.9			su	1
Specific Conductance @ 25° C - Field		120.1	566		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	29.1			° C	1
Water level depth from top of casing		No Method	15.57			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2257	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2257	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	150		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	22		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1638	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/14/2014 1005				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1638	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		71	41-144
2-Fluorobiphenyl		94	37-129
2-Fluorophenol		94	24-127
Nitrobenzene-d5		101	38-127
Phenol-d5		99	28-128
Terphenyl-d14		92	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PG14018-004		
Description: W-48			Matrix: Aqueous		
Date Sampled: 07/14/2014 1045			Project Name: Annual GWM		
Date Received: 07/14/2014			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/14/2014 1040	BTF		
1		(Specific Con) 120.1	1	07/14/2014 1040	BTF		
1		(Temperature ) SM 2550B-2010	1	07/14/2014 1040	BTF		
1		(Water level )	1	07/14/2014 1040	BTF		
1		(Well Depth)	1	07/14/2014 1040	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.79			su	1
Specific Conductance @ 25° C - Field		120.1	128		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	28.6			° C	1
Water level depth from top of casing		No Method	26.78			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2320	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.2		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2014 2320	PMM2		51801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1702	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PG14018-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/14/2014 1045				Project Name: Annual GWM			
Date Received: 07/14/2014				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/16/2014 1702	DRB1	07/15/2014 1454	51377

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		68	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		91	24-127
Nitrobenzene-d5		101	38-127
Phenol-d5		93	28-128
Terphenyl-d14		102	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Shealy Environmental Services, Inc.**  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9701  
[www.shealyweb.com](http://www.shealyweb.com)

Number 05389

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 14

Page 1 of 1  
Replaces Date: 09/26/13  
Effective Date: 03/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: CMT 7/14/14 Lot #: B14018

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>87.0 / 4.0 / 4.1</u> °C    /    /    °C    /    /    °C    /    /    °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles    IR Gun ID: #3    IR Gun Correction Factor: <u>±0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of >2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CMT</u> Verified by: _____ Date: <u>7/14/14</u>		

Comments:



August 20, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 352805

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 16, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

352805

VENDOR: General Engineering Laboratories (GEL)Month: JulyYear: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C. 29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/14/14 09:40	1000	X	X	X		X	REC
WELL	#3A	7/10/14 09:46	1000	X	X	X		X	REC
WELL	#7	7/7/14 11:55	1000	X	X	X		X	REC
WELL	#10	7/7/14 14:08	1000	X	X	X		X	REC
WELL	#13R	7/7/14 11:32	1000	X	X	X		X	REC
WELL	#14	7/8/14 09:42	1000	X	X	X		X	REC
WELL	#15	7/8/14 10:18	1000	X	X	X		X	REC
WELL	#16	7/8/14 10:00	1000	X	X	X		X	REC
WELL	#17	7/10/14 11:00	1000	X	X	X		X	REC
WELL	#18	7/7/14 10:28	1000	X	X	X		X	REC
WELL	#20	7/10/14 10:25	1000	X	X	X		X	REC
WELL	#22	7/7/14 10:10	1000	X	X	X		X	REC
WELL	#23R	7/8/14 09:18	1000	X	X	X		X	REC
WELL	#24	7/8/14 08:48	1000	X	X	X		X	REC
WELL	#26	7/14/14 10:20	1000	X	X	X		X	REC
WELL	#27	7/10/14 10:04	1000	X	X	X		X	REC
WELL	#28	7/7/14 11:02	1000	X	X	X		X	REC
WELL	#29	7/7/14 09:28	1000	X	X	X		X	REC
WELL	#30	7/7/14 09:50	1000	X	X	X		X	REC
WELL	#32	7/7/14 14:26	1000	X	X	X		X	REC
WELL	#33	7/8/14 11:02	1000	X	X	X		X	REC
WELL	#38	7/7/14 08:25	1000	X	X	X		X	REC
WELL	#39	7/10/14 11:24	1000	X	X	X		X	REC
WELL	#41R	7/14/14 10:05	1000	X	X	X		X	REC
WELL	#43	7/10/14 11:45	1000	X	X	X		X	REC

Please email crewsrc@westinghouse.com when shipment is received

Technician: Randy CrewsDate Shipped: 7/16/14

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>			SDG/AR/COC/Work Order: <u>352805</u>		
Received By: <u>[Signature]</u>			Date Received: <u>7-16-14</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>		
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?		
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>			
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.		
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>			

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>24°C</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462962</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>Vol 7-16-14</u> <u>7.4</u> If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <u>Courier</u> Other

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 352805 GEL Work Order: 352805

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by





# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 352805001  
Matrix: Ground Water  
Collect Date: 14-JUL-14 09:40  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.29	+/-20.9	38.3		pCi/L		MJH1	08/01/14	1146 1405429	1
Americium-241	U	0.613	+/-26.0	47.5		pCi/L					
Antimony-124	U	7.50	+/-11.5	25.6		pCi/L					
Antimony-125	U	3.72	+/-13.5	24.3		pCi/L					
Barium-133	U	1.41	+/-6.10	9.79		pCi/L					
Barium-140	U	-17.8	+/-16.1	25.5		pCi/L					
Beryllium-7	U	-0.334	+/-43.5	76.7		pCi/L					
Bismuth-212	U	7.60	+/-64.0	118		pCi/L					
Bismuth-214	U	-9.48	+/-12.2	19.8		pCi/L					
Cerium-139	U	1.22	+/-4.23	6.66		pCi/L					
Cerium-141	U	-4.21	+/-9.06	15.3		pCi/L					
Cerium-144	U	24.2	+/-30.2	45.6		pCi/L					
Cesium-134	U	-1.86	+/-5.95	8.86		pCi/L					
Cesium-136	U	2.37	+/-14.1	27.3		pCi/L					
Cesium-137	U	4.42	+/-5.86	4.68	10.0	pCi/L					
Chromium-51	U	19.4	+/-60.0	97.4		pCi/L					
Cobalt-56	U	0.985	+/-5.27	9.77		pCi/L					
Cobalt-57	U	-4.66	+/-3.82	5.75		pCi/L					
Cobalt-58	U	0.235	+/-5.29	9.67		pCi/L					
Cobalt-60	U	-0.16	+/-5.73	10.6		pCi/L					
Europium-152	U	13.7	+/-18.2	23.5		pCi/L					
Europium-154	U	-7.72	+/-14.8	25.6		pCi/L					
Europium-155	U	-3.63	+/-14.5	25.2		pCi/L					
Iridium-192	U	7.43	+/-6.76	9.41		pCi/L					
Iron-59	U	-10.3	+/-11.1	18.3		pCi/L					
Lead-210	U	-288	+/-1000	1520		pCi/L					
Lead-212	U	11.5	+/-13.5	16.8		pCi/L					
Lead-214	U	12.6	+/-16.1	19.8		pCi/L					
Manganese-54	U	-0.952	+/-4.28	7.61		pCi/L					
Mercury-203	U	1.69	+/-5.40	9.88		pCi/L					
Neodymium-147	U	20.0	+/-81.4	155		pCi/L					
Neptunium-239	U	7.77	+/-36.3	64.4		pCi/L					
Niobium-94	U	0.283	+/-4.65	8.48		pCi/L					
Niobium-95	UI	0.00	+/-5.18	6.65		pCi/L					
Potassium-40	U	-35.3	+/-70.7	142		pCi/L					
Promethium-144	U	-1.72	+/-6.08	9.14		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 352805001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.01	+/-6.14	11.2	pCi/L
Radium-228	U	-1.29	+/-20.9	38.3	pCi/L
Ruthenium-106	U	-21.4	+/-43.2	75.4	pCi/L
Silver-110m	U	6.18	+/-4.88	8.16	pCi/L
Sodium-22	U	-2.81	+/-5.22	9.00	pCi/L
Thallium-208	U	4.34	+/-8.29	8.79	pCi/L
Thorium-230	U	-1210	+/-1770	2830	pCi/L
Thorium-234	U	-315	+/-284	483	pCi/L
Tin-113	U	-1.31	+/-6.78	11.8	pCi/L
Uranium-235	U	-25.7	+/-31.2	49.9	pCi/L
Uranium-238	U	-315	+/-284	483	pCi/L
Yttrium-88	U	-0.238	+/-6.27	12.1	pCi/L
Zinc-65	U	-10.9	+/-10.6	17.2	pCi/L
Zirconium-95	U	7.42	+/-10.8	18.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.09	+/-3.04	3.93	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	14.1	+/-3.55	3.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.0	+/-92.4	156	300	pCi/L	MYM1	08/10/14	0840	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	352805002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 09:46		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.873	+/-21.4	33.8		pCi/L		MJH1	08/01/14	1146 1405429	1
Americium-241	U	-25.3	+/-38.2	66.4		pCi/L					
Antimony-124	U	2.54	+/-12.6	26.7		pCi/L					
Antimony-125	U	1.59	+/-12.3	22.7		pCi/L					
Barium-133	U	-2.18	+/-5.53	9.81		pCi/L					
Barium-140	U	1.62	+/-17.5	35.7		pCi/L					
Beryllium-7	U	18.4	+/-45.3	86.5		pCi/L					
Bismuth-212	U	45.3	+/-76.3	132		pCi/L					
Bismuth-214	U	3.48	+/-11.4	20.5		pCi/L					
Cerium-139	U	3.57	+/-4.21	7.78		pCi/L					
Cerium-141	U	1.70	+/-10.6	17.5		pCi/L					
Cerium-144	U	10.1	+/-26.9	48.7		pCi/L					
Cesium-134	U	1.28	+/-3.90	8.00		pCi/L					
Cesium-136	U	5.89	+/-19.0	37.6		pCi/L					
Cesium-137	U	2.38	+/-3.73	7.62	10.0	pCi/L					
Chromium-51	U	14.1	+/-59.0	110		pCi/L					
Cobalt-56	U	-1.75	+/-4.99	9.14		pCi/L					
Cobalt-57	U	-1.18	+/-3.42	5.93		pCi/L					
Cobalt-58	U	-3.84	+/-5.20	7.30		pCi/L					
Cobalt-60	U	-1.99	+/-11.0	9.95		pCi/L					
Europium-152	U	2.92	+/-13.3	24.8		pCi/L					
Europium-154	U	4.54	+/-16.0	28.1		pCi/L					
Europium-155	U	5.17	+/-14.4	26.3		pCi/L					
Iridium-192	U	2.83	+/-5.33	10.1		pCi/L					
Iron-59	U	-9.05	+/-14.8	20.8		pCi/L					
Lead-210	U	-1280	+/-2040	3180		pCi/L					
Lead-212	U	14.1	+/-16.0	17.0		pCi/L					
Lead-214	U	-4.2	+/-11.3	18.8		pCi/L					
Manganese-54	U	6.74	+/-4.22	8.19		pCi/L					
Mercury-203	U	-3.37	+/-5.57	9.78		pCi/L					
Neodymium-147	U	-76.8	+/-109	184		pCi/L					
Neptunium-239	U	-3.88	+/-36.7	64.7		pCi/L					
Niobium-94	U	1.73	+/-3.92	7.60		pCi/L					
Niobium-95	U	-0.333	+/-5.51	9.96		pCi/L					
Potassium-40	U	14.1	+/-61.5	127		pCi/L					
Promethium-144	U	-0.592	+/-4.72	8.42		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 352805002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.175	+/-5.65	10.3	pCi/L
Radium-228	U	0.873	+/-21.4	33.8	pCi/L
Ruthenium-106	U	-41.4	+/-43.5	70.2	pCi/L
Silver-110m	U	-3.4	+/-3.86	6.24	pCi/L
Sodium-22	U	1.61	+/-5.66	9.95	pCi/L
Thallium-208	U	4.38	+/-6.70	8.14	pCi/L
Thorium-230	U	792	+/-1920	3580	pCi/L
Thorium-234	U	-126	+/-328	516	pCi/L
Tin-113	U	0.199	+/-7.38	11.6	pCi/L
Uranium-235	U	9.21	+/-30.5	48.2	pCi/L
Uranium-238	U	-126	+/-328	516	pCi/L
Yttrium-88	U	1.68	+/-4.88	10.9	pCi/L
Zinc-65	U	7.84	+/-6.52	17.1	pCi/L
Zirconium-95	U	-3.72	+/-9.58	16.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.16	+/-1.52	2.48	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	1.15	+/-1.91	3.35	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-18.1	+/-84.4	150	300	pCi/L	MYM1	08/10/14	0856	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 352805003  
Matrix: Ground Water  
Collect Date: 07-JUL-14 11:55  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.453	+/-27.6	31.1		pCi/L		MJH1	08/01/14	1147 1405429	1
Americium-241	U	-3.75	+/-13.7	21.1		pCi/L					
Antimony-124	U	-4.0	+/-14.2	25.9		pCi/L					
Antimony-125	U	1.75	+/-11.0	20.6		pCi/L					
Barium-133	U	-2.09	+/-6.69	9.97		pCi/L					
Barium-140	U	-16.5	+/-23.5	31.4		pCi/L					
Beryllium-7	U	7.22	+/-49.3	90.7		pCi/L					
Bismuth-212	U	25.5	+/-70.3	124		pCi/L					
Bismuth-214	U	11.4	+/-11.7	15.8		pCi/L					
Cerium-139	U	1.62	+/-3.66	6.75		pCi/L					
Cerium-141	U	7.47	+/-11.9	16.9		pCi/L					
Cerium-144	U	0.987	+/-24.1	41.0		pCi/L					
Cesium-134	U	1.12	+/-5.53	9.24		pCi/L					
Cesium-136	U	-4.62	+/-20.8	37.6		pCi/L					
Cesium-137	U	4.30	+/-5.23	6.99	10.0	pCi/L					
Chromium-51	U	19.4	+/-60.7	109		pCi/L					
Cobalt-56	U	3.15	+/-5.47	10.8		pCi/L					
Cobalt-57	U	0.499	+/-3.25	5.58		pCi/L					
Cobalt-58	U	0.824	+/-4.93	9.46		pCi/L					
Cobalt-60	U	2.95	+/-4.53	9.53		pCi/L					
Europium-152	U	-6.25	+/-13.0	21.8		pCi/L					
Europium-154	U	-5.74	+/-15.4	23.4		pCi/L					
Europium-155	U	16.1	+/-11.6	21.7		pCi/L					
Iridium-192	U	-2.87	+/-4.68	7.83		pCi/L					
Iron-59	U	-8.3	+/-11.4	19.1		pCi/L					
Lead-210	U	169	+/-379	372		pCi/L					
Lead-212	U	1.46	+/-11.2	12.0		pCi/L					
Lead-214	U	-5.64	+/-11.3	17.6		pCi/L					
Manganese-54	U	0.0308	+/-4.16	7.84		pCi/L					
Mercury-203	U	3.29	+/-5.80	10.6		pCi/L					
Neodymium-147	U	-67.5	+/-122	210		pCi/L					
Neptunium-239	U	14.5	+/-35.4	55.7		pCi/L					
Niobium-94	U	4.33	+/-4.47	8.72		pCi/L					
Niobium-95	U	4.49	+/-5.14	10.5		pCi/L					
Potassium-40	U	43.5	+/-74.9	70.7		pCi/L					
Promethium-144	U	-0.192	+/-4.75	8.43		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 352805003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.58	+/-6.21	10.4	pCi/L
Radium-228	U	0.453	+/-27.6	31.1	pCi/L
Ruthenium-106	U	-20.6	+/-39.8	68.2	pCi/L
Silver-110m	U	0.735	+/-4.31	7.04	pCi/L
Sodium-22	U	-2.04	+/-5.46	8.31	pCi/L
Thallium-208	U	-1.26	+/-5.65	9.62	pCi/L
Thorium-230	U	769	+/-1160	1730	pCi/L
Thorium-234	U	93.7	+/-161	201	pCi/L
Tin-113	U	0.788	+/-5.65	10.5	pCi/L
Uranium-235	U	19.3	+/-30.8	40.8	pCi/L
Uranium-238	U	93.7	+/-161	201	pCi/L
Yttrium-88	U	-0.488	+/-5.69	11.2	pCi/L
Zinc-65	U	4.04	+/-10.1	19.6	pCi/L
Zirconium-95	U	-0.679	+/-8.46	16.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.58	+/-4.70	4.86	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	147	+/-6.68	3.00	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	239	+/-97.9	152	300	pCi/L	MYM1	08/10/14	0912	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10  
Sample ID: 352805004  
Matrix: Ground Water  
Collect Date: 07-JUL-14 14:08  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.99	+/-19.9	37.4		pCi/L		MJH1	08/01/14	1148 1405429	1
Americium-241	U	-27.7	+/-34.8	50.2		pCi/L					
Antimony-124	U	-12.4	+/-13.7	22.1		pCi/L					
Antimony-125	U	-1.57	+/-14.3	23.4		pCi/L					
Barium-133	U	0.398	+/-6.75	10.4		pCi/L					
Barium-140	U	0.513	+/-17.9	36.4		pCi/L					
Beryllium-7	U	14.6	+/-46.1	87.9		pCi/L					
Bismuth-212	U	-44.5	+/-79.5	112		pCi/L					
Bismuth-214	U	5.22	+/-14.1	17.5		pCi/L					
Cerium-139	U	-3.07	+/-4.21	7.22		pCi/L					
Cerium-141	U	-3.8	+/-13.1	19.3		pCi/L					
Cerium-144	U	13.9	+/-32.6	53.5		pCi/L					
Cesium-134	U	-0.20	+/-4.80	8.28		pCi/L					
Cesium-136	U	41.8	+/-16.7	45.9		pCi/L					
Cesium-137	U	1.35	+/-4.52	8.59	10.0	pCi/L					
Chromium-51	U	19.1	+/-62.8	114		pCi/L					
Cobalt-56	U	-0.518	+/-5.52	10.4		pCi/L					
Cobalt-57	U	-4.79	+/-3.78	6.37		pCi/L					
Cobalt-58	U	0.506	+/-6.13	10.1		pCi/L					
Cobalt-60	U	0.032	+/-4.93	9.41		pCi/L					
Europium-152	U	-14.4	+/-12.2	19.0		pCi/L					
Europium-154	U	6.40	+/-14.0	28.5		pCi/L					
Europium-155	U	5.68	+/-14.7	25.7		pCi/L					
Iridium-192	U	-1.85	+/-5.19	8.87		pCi/L					
Iron-59	U	-2.39	+/-11.3	21.0		pCi/L					
Lead-210	U	532	+/-1210	1980		pCi/L					
Lead-212	UI	0.00	+/-15.6	18.7		pCi/L					
Lead-214	U	13.2	+/-16.1	21.6		pCi/L					
Manganese-54	U	0.0343	+/-4.34	8.29		pCi/L					
Mercury-203	U	3.72	+/-6.29	11.5		pCi/L					
Neodymium-147	U	-30.8	+/-144	244		pCi/L					
Neptunium-239	U	-58.4	+/-37.6	62.3		pCi/L					
Niobium-94	U	2.56	+/-4.32	8.36		pCi/L					
Niobium-95	U	-6.32	+/-5.99	9.09		pCi/L					
Potassium-40	UI	0.00	+/-67.7	81.6		pCi/L					
Promethium-144	U	-1.69	+/-4.41	7.68		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10 Project: WNUC00127  
Sample ID: 352805004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.37	+/-6.29	10.6	pCi/L
Radium-228	U	5.99	+/-19.9	37.4	pCi/L
Ruthenium-106	U	40.6	+/-44.7	88.6	pCi/L
Silver-110m	U	1.82	+/-4.55	8.70	pCi/L
Sodium-22	U	2.27	+/-4.96	10.1	pCi/L
Thallium-208	U	-3.44	+/-6.38	10.8	pCi/L
Thorium-230	U	-371	+/-2050	3320	pCi/L
Thorium-234	U	30.8	+/-420	415	pCi/L
Tin-113	U	5.13	+/-6.24	12.3	pCi/L
Uranium-235	U	30.9	+/-43.0	47.1	pCi/L
Uranium-238	U	30.8	+/-420	415	pCi/L
Yttrium-88	U	0.0196	+/-6.21	12.3	pCi/L
Zinc-65	U	3.09	+/-11.2	19.4	pCi/L
Zirconium-95	U	-5.41	+/-10.9	18.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.97	+/-3.32	4.81	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		79.2	+/-7.56	3.83	5.00	pCi/L					
Alpha	U	0.450	+/-2.69	4.93	5.00	pCi/L	JXH3	08/12/14	1114	1406420	3
Beta		75.3	+/-6.05	3.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.0	+/-94.4	159	300	pCi/L	MYM1	08/11/14	0811	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	352805004	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 352805005  
Matrix: Ground Water  
Collect Date: 07-JUL-14 11:32  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.62	+/-16.5	28.7		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	-2.72	+/-26.6	40.8		pCi/L					
Antimony-124	U	-11.6	+/-13.3	21.5		pCi/L					
Antimony-125	U	-2.91	+/-9.26	16.5		pCi/L					
Barium-133	U	-0.639	+/-4.59	8.35		pCi/L					
Barium-140	U	-11.8	+/-19.1	33.1		pCi/L					
Beryllium-7	U	-18.8	+/-36.0	62.2		pCi/L					
Bismuth-212	U	-8.63	+/-54.8	102		pCi/L					
Bismuth-214	U	6.27	+/-10.7	15.0		pCi/L					
Cerium-139	U	1.83	+/-3.63	6.03		pCi/L					
Cerium-141	U	0.0804	+/-9.37	16.6		pCi/L					
Cerium-144	U	4.98	+/-22.6	40.9		pCi/L					
Cesium-134	U	0.928	+/-3.86	7.60		pCi/L					
Cesium-136	U	5.97	+/-17.3	34.4		pCi/L					
Cesium-137	U	0.950	+/-3.84	7.17	10.0	pCi/L					
Chromium-51	U	48.1	+/-57.4	109		pCi/L					
Cobalt-56	U	0.261	+/-4.49	8.55		pCi/L					
Cobalt-57	U	-0.952	+/-2.80	4.93		pCi/L					
Cobalt-58	U	-0.875	+/-3.83	7.15		pCi/L					
Cobalt-60	U	2.96	+/-3.72	7.26		pCi/L					
Europium-152	U	5.54	+/-10.8	20.2		pCi/L					
Europium-154	U	6.72	+/-10.7	23.2		pCi/L					
Europium-155	U	-2.94	+/-12.3	21.8		pCi/L					
Iridium-192	U	-2.95	+/-4.50	7.87		pCi/L					
Iron-59	U	1.39	+/-9.13	17.9		pCi/L					
Lead-210	U	-594	+/-979	1490		pCi/L					
Lead-212	U	-1.71	+/-8.60	13.5		pCi/L					
Lead-214	U	-2.24	+/-9.34	15.7		pCi/L					
Manganese-54	U	3.79	+/-4.08	8.42		pCi/L					
Mercury-203	U	3.79	+/-5.55	9.54		pCi/L					
Neodymium-147	U	-17	+/-109	196		pCi/L					
Neptunium-239	U	-1.87	+/-30.9	55.4		pCi/L					
Niobium-94	U	-1.2	+/-3.62	6.58		pCi/L					
Niobium-95	U	-1.25	+/-5.83	10.4		pCi/L					
Potassium-40	U	5.98	+/-50.1	80.3		pCi/L					
Promethium-144	U	-0.804	+/-3.56	6.60		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 352805005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.39	+/-4.22	7.07	pCi/L
Radium-228	U	-2.62	+/-16.5	28.7	pCi/L
Ruthenium-106	U	25.8	+/-35.8	69.8	pCi/L
Silver-110m	U	0.356	+/-3.77	6.89	pCi/L
Sodium-22	U	1.70	+/-3.92	8.26	pCi/L
Thallium-208	U	-3.18	+/-4.67	7.51	pCi/L
Thorium-230	U	1820	+/-1890	2510	pCi/L
Thorium-234	U	220	+/-307	330	pCi/L
Tin-113	U	-3.29	+/-4.67	8.02	pCi/L
Uranium-235	U	4.54	+/-27.0	45.7	pCi/L
Uranium-238	U	220	+/-307	330	pCi/L
Yttrium-88	U	3.99	+/-6.18	12.3	pCi/L
Zinc-65	U	-2.33	+/-10.2	15.6	pCi/L
Zirconium-95	U	4.15	+/-8.46	16.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.777	+/-2.99	4.83	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta		91.7	+/-8.25	4.96	5.00	pCi/L					
Alpha	U	0.945	+/-2.21	3.31	5.00	pCi/L	JXH3	08/12/14	1114	1406420	3
Beta		97.6	+/-6.52	4.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	193	+/-97.4	155	300	pCi/L	MYM1	08/10/14	0944	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID: WELL 13R  
Sample ID: 352805005

Project: WNUC00127  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	352805006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 09:42		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.47	+/-19.5	36.9		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	1.02	+/-24.8	38.1		pCi/L					
Antimony-124	U	0.152	+/-14.2	27.3		pCi/L					
Antimony-125	U	-6.01	+/-12.0	20.8		pCi/L					
Barium-133	U	-3.21	+/-5.90	10.2		pCi/L					
Barium-140	U	-13.2	+/-19.2	32.4		pCi/L					
Beryllium-7	U	37.3	+/-43.6	85.4		pCi/L					
Bismuth-212	U	52.3	+/-61.6	122		pCi/L					
Bismuth-214	U	1.10	+/-10.3	17.8		pCi/L					
Cerium-139	U	2.55	+/-4.15	7.38		pCi/L					
Cerium-141	U	4.67	+/-10.1	17.8		pCi/L					
Cerium-144	U	4.84	+/-28.5	49.4		pCi/L					
Cesium-134	U	0.796	+/-4.59	8.57		pCi/L					
Cesium-136	U	-1.85	+/-20.9	36.4		pCi/L					
Cesium-137	U	-1.91	+/-4.01	6.91	10.0	pCi/L					
Chromium-51	U	-67.7	+/-59.9	99.2		pCi/L					
Cobalt-56	U	5.28	+/-3.45	10.6		pCi/L					
Cobalt-57	U	-4.02	+/-3.79	6.13		pCi/L					
Cobalt-58	U	-1.25	+/-5.00	8.82		pCi/L					
Cobalt-60	U	1.61	+/-4.36	8.90		pCi/L					
Europium-152	U	-2.56	+/-13.7	22.1		pCi/L					
Europium-154	U	16.8	+/-11.7	27.4		pCi/L					
Europium-155	U	-0.137	+/-17.7	26.6		pCi/L					
Iridium-192	U	1.48	+/-5.14	8.37		pCi/L					
Iron-59	U	-18.1	+/-11.6	17.2		pCi/L					
Lead-210	U	366	+/-732	747		pCi/L					
Lead-212	U	-2.06	+/-9.55	15.6		pCi/L					
Lead-214	U	11.9	+/-10.4	20.0		pCi/L					
Manganese-54	U	1.75	+/-4.03	7.63		pCi/L					
Mercury-203	U	1.69	+/-5.96	10.9		pCi/L					
Neodymium-147	U	42.2	+/-123	206		pCi/L					
Neptunium-239	U	0.706	+/-38.4	66.1		pCi/L					
Niobium-94	U	-0.471	+/-4.28	7.61		pCi/L					
Niobium-95	U	0.291	+/-5.21	9.52		pCi/L					
Potassium-40	U	27.8	+/-65.8	130		pCi/L					
Promethium-144	U	-4.18	+/-4.23	6.78		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 14 Project: WNUC00127  
Sample ID: 352805006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.09	+/-5.21	8.94	pCi/L
Radium-228	U	7.47	+/-19.5	36.9	pCi/L
Ruthenium-106	U	-35.6	+/-44.5	73.7	pCi/L
Silver-110m	U	-4.94	+/-4.26	6.66	pCi/L
Sodium-22	U	5.20	+/-4.30	9.71	pCi/L
Thallium-208	U	4.71	+/-5.70	10.6	pCi/L
Thorium-230	U	898	+/-1750	2810	pCi/L
Thorium-234	U	235	+/-268	350	pCi/L
Tin-113	U	-3.45	+/-6.01	10.4	pCi/L
Uranium-235	U	-36	+/-31.5	46.2	pCi/L
Uranium-238	U	235	+/-268	350	pCi/L
Yttrium-88	U	3.75	+/-5.01	11.4	pCi/L
Zinc-65	U	10.6	+/-10.5	20.4	pCi/L
Zirconium-95	U	2.37	+/-8.15	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.31	+/-3.48	4.29	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	6.07	+/-2.82	3.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	46.6	+/-88.9	152	300	pCi/L	MYM1	08/10/14	1000	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	352805007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:18		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.4	+/-17.1	32.1		pCi/L		MJH1	08/01/14	1149 1405429	1
Americium-241	U	-17.8	+/-12.5	21.0		pCi/L					
Antimony-124	U	9.87	+/-12.1	25.8		pCi/L					
Antimony-125	U	-1.93	+/-10.9	17.0		pCi/L					
Barium-133	U	-1.77	+/-5.15	7.95		pCi/L					
Barium-140	U	1.85	+/-18.7	31.4		pCi/L					
Beryllium-7	U	-4.76	+/-39.6	71.8		pCi/L					
Bismuth-212	U	-8.46	+/-64.1	104		pCi/L					
Bismuth-214	U	0.641	+/-12.7	18.0		pCi/L					
Cerium-139	U	3.24	+/-3.39	6.28		pCi/L					
Cerium-141	U	-4.17	+/-10.3	14.7		pCi/L					
Cerium-144	U	-9.11	+/-23.7	39.5		pCi/L					
Cesium-134	U	-0.593	+/-4.26	7.19		pCi/L					
Cesium-136	U	1.00	+/-14.4	28.0		pCi/L					
Cesium-137	U	1.70	+/-3.97	7.52	10.0	pCi/L					
Chromium-51	U	17.3	+/-51.9	92.6		pCi/L					
Cobalt-56	U	-0.55	+/-4.80	8.56		pCi/L					
Cobalt-57	U	0.0629	+/-2.81	4.99		pCi/L					
Cobalt-58	U	3.52	+/-4.68	8.62		pCi/L					
Cobalt-60	U	0.481	+/-4.69	8.09		pCi/L					
Europium-152	U	-4.13	+/-10.1	17.0		pCi/L					
Europium-154	U	5.35	+/-11.8	23.6		pCi/L					
Europium-155	U	2.58	+/-10.7	19.4		pCi/L					
Iridium-192	U	-3.4	+/-4.32	7.05		pCi/L					
Iron-59	U	-1.41	+/-9.26	17.4		pCi/L					
Lead-210	U	-202	+/-243	360		pCi/L					
Lead-212	U	5.82	+/-11.9	14.1		pCi/L					
Lead-214	U	3.27	+/-12.9	17.4		pCi/L					
Manganese-54	U	1.07	+/-3.84	7.19		pCi/L					
Mercury-203	U	-0.793	+/-4.47	7.71		pCi/L					
Neodymium-147	U	-48.3	+/-133	201		pCi/L					
Neptunium-239	U	-16	+/-28.6	49.3		pCi/L					
Niobium-94	U	-1.91	+/-3.64	6.24		pCi/L					
Niobium-95	U	-3.94	+/-5.41	7.53		pCi/L					
Potassium-40	U	58.4	+/-55.1	83.2		pCi/L					
Promethium-144	U	2.71	+/-3.84	7.41		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	352805007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.3	+/-4.49	8.03	pCi/L
Radium-228	U	20.4	+/-17.1	32.1	pCi/L
Ruthenium-106	U	12.8	+/-34.9	65.8	pCi/L
Silver-110m	U	-2.3	+/-3.84	6.57	pCi/L
Sodium-22	U	1.83	+/-4.16	8.32	pCi/L
Thallium-208	U	1.23	+/-6.42	5.98	pCi/L
Thorium-230	U	-202	+/-914	1630	pCi/L
Thorium-234	U	-30.5	+/-129	226	pCi/L
Tin-113	U	0.835	+/-5.15	9.54	pCi/L
Uranium-235	U	13.2	+/-26.9	38.2	pCi/L
Uranium-238	U	-30.5	+/-129	226	pCi/L
Yttrium-88	U	-2.05	+/-4.11	7.57	pCi/L
Zinc-65	U	4.32	+/-9.67	16.4	pCi/L
Zirconium-95	U	2.17	+/-8.50	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.31	+/-3.68	4.39	5.00	pCi/L	JXH3	08/11/14	1445	1406420	2
Beta	195	+/-11.8	3.47	5.00	pCi/L					
Alpha	4.04	+/-2.74	2.92	5.00	pCi/L	JXH3	08/12/14	1116	1406420	3
Beta	204	+/-9.81	4.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	306	+/-100	151	300	pCi/L	MYM1	08/10/14	1017	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.2	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	352805007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	352805008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:00		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.28	+/-20.7	32.5		pCi/L		MJH1	08/01/14	1150 1405429	1
Americium-241	U	-0.696	+/-6.45	10.2		pCi/L					
Antimony-124	U	6.68	+/-13.0	25.8		pCi/L					
Antimony-125	U	-1.58	+/-10.5	19.2		pCi/L					
Barium-133	U	0.625	+/-4.61	8.28		pCi/L					
Barium-140	U	-9.21	+/-20.7	36.9		pCi/L					
Beryllium-7	U	30.1	+/-43.5	85.2		pCi/L					
Bismuth-212	U	-39.8	+/-74.0	126		pCi/L					
Bismuth-214	U	12.3	+/-13.9	19.4		pCi/L					
Cerium-139	U	-1.08	+/-3.04	5.42		pCi/L					
Cerium-141	U	3.67	+/-8.04	13.5		pCi/L					
Cerium-144	U	0.258	+/-21.4	34.9		pCi/L					
Cesium-134	U	0.323	+/-4.11	7.99		pCi/L					
Cesium-136	U	-3.96	+/-17.7	32.6		pCi/L					
Cesium-137	U	-1.15	+/-4.92	7.44	10.0	pCi/L					
Chromium-51	U	-33	+/-57.7	96.9		pCi/L					
Cobalt-56	U	3.01	+/-5.51	10.9		pCi/L					
Cobalt-57	U	1.15	+/-2.44	4.37		pCi/L					
Cobalt-58	U	2.15	+/-4.93	9.83		pCi/L					
Cobalt-60	U	-3.66	+/-4.00	6.57		pCi/L					
Europium-152	U	-3.17	+/-12.4	21.4		pCi/L					
Europium-154	U	-8.5	+/-12.8	22.4		pCi/L					
Europium-155	U	1.63	+/-9.40	16.5		pCi/L					
Iridium-192	U	3.06	+/-4.66	8.65		pCi/L					
Iron-59	U	-9.05	+/-13.2	17.8		pCi/L					
Lead-210	U	10.5	+/-101	92.3		pCi/L					
Lead-212	U	-1.15	+/-8.12	13.6		pCi/L					
Lead-214	U	-9.69	+/-11.0	16.3		pCi/L					
Manganese-54	U	0.0719	+/-5.01	8.18		pCi/L					
Mercury-203	U	-1.94	+/-4.87	8.39		pCi/L					
Neodymium-147	U	46.5	+/-121	230		pCi/L					
Neptunium-239	U	2.77	+/-25.3	44.0		pCi/L					
Niobium-94	U	-4.78	+/-4.67	7.43		pCi/L					
Niobium-95	U	-2.47	+/-4.98	8.91		pCi/L					
Potassium-40	U	6.24	+/-76.7	88.3		pCi/L					
Promethium-144	U	2.83	+/-4.94	9.33		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	352805008	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.97	+/-6.08	9.32	pCi/L
Radium-228	U	-4.28	+/-20.7	32.5	pCi/L
Ruthenium-106	U	-1.86	+/-38.5	70.0	pCi/L
Silver-110m	U	0.261	+/-4.10	7.57	pCi/L
Sodium-22	U	-3.1	+/-4.53	7.89	pCi/L
Thallium-208	U	1.62	+/-7.73	7.38	pCi/L
Thorium-230	U	707	+/-683	949	pCi/L
Thorium-234	U	53.6	+/-87.0	94.1	pCi/L
Tin-113	U	-3.78	+/-5.51	9.63	pCi/L
Uranium-235	U	4.34	+/-24.5	34.1	pCi/L
Uranium-238	U	53.6	+/-87.0	94.1	pCi/L
Yttrium-88	U	-3.02	+/-4.97	8.90	pCi/L
Zinc-65	U	-8.9	+/-10.8	16.4	pCi/L
Zirconium-95	U	-5.11	+/-10.8	19.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.41	+/-2.43	4.42	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		12.8	+/-3.27	2.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.28	+/-86.4	153	300	pCi/L	MYM1	08/10/14	1033	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	352805009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:00		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.6	+/-27.2	30.6		pCi/L		MJH1	08/02/14	1032 1405429	1
Americium-241	U	-8.39	+/-22.2	34.0		pCi/L					
Antimony-124	U	-1.13	+/-11.1	21.1		pCi/L					
Antimony-125	U	-2.26	+/-9.28	15.9		pCi/L					
Barium-133	U	-4.9	+/-5.23	7.26		pCi/L					
Barium-140	U	-11.5	+/-20.2	29.2		pCi/L					
Beryllium-7	U	19.3	+/-36.3	68.9		pCi/L					
Bismuth-212	U	-12.2	+/-54.7	90.5		pCi/L					
Bismuth-214	U	6.76	+/-13.7	13.7		pCi/L					
Cerium-139	U	2.56	+/-3.29	6.09		pCi/L					
Cerium-141	U	-0.716	+/-9.49	14.8		pCi/L					
Cerium-144	U	-6.42	+/-23.5	39.2		pCi/L					
Cesium-134	U	-0.37	+/-4.05	7.21		pCi/L					
Cesium-136	U	8.87	+/-16.4	32.1		pCi/L					
Cesium-137	U	1.27	+/-3.44	6.48	10.0	pCi/L					
Chromium-51	U	-2.8	+/-61.1	94.4		pCi/L					
Cobalt-56	U	-2.83	+/-4.37	7.30		pCi/L					
Cobalt-57	U	0.816	+/-2.97	5.10		pCi/L					
Cobalt-58	U	-0.904	+/-4.14	7.29		pCi/L					
Cobalt-60	U	-2.47	+/-3.80	6.44		pCi/L					
Europium-152	U	-5.92	+/-11.0	18.5		pCi/L					
Europium-154	U	6.77	+/-11.8	21.1		pCi/L					
Europium-155	U	-4.76	+/-11.5	19.3		pCi/L					
Iridium-192	U	-1.29	+/-4.46	7.67		pCi/L					
Iron-59	U	1.83	+/-9.52	17.8		pCi/L					
Lead-210	U	-694	+/-751	1020		pCi/L					
Lead-212	U	-5.52	+/-8.02	12.8		pCi/L					
Lead-214	U	9.72	+/-14.5	16.8		pCi/L					
Manganese-54	U	2.70	+/-4.17	7.07		pCi/L					
Mercury-203	U	7.19	+/-4.92	9.28		pCi/L					
Neodymium-147	U	-19.1	+/-108	168		pCi/L					
Neptunium-239	U	45.2	+/-32.2	52.2		pCi/L					
Niobium-94	U	2.38	+/-4.37	7.01		pCi/L					
Niobium-95	U	0.506	+/-4.41	8.02		pCi/L					
Potassium-40	U	3.56	+/-51.9	92.3		pCi/L					
Promethium-144	U	-1.42	+/-3.78	6.56		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17 Project: WNUC00127  
Sample ID: 352805009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.71	+/-4.42	7.62	pCi/L
Radium-228	U	20.6	+/-27.2	30.6	pCi/L
Ruthenium-106	U	3.01	+/-33.1	60.5	pCi/L
Silver-110m	U	-2.19	+/-3.44	5.87	pCi/L
Sodium-22	U	2.34	+/-4.16	7.43	pCi/L
Thallium-208	U	0.983	+/-5.06	8.03	pCi/L
Thorium-230	U	-369	+/-1370	2110	pCi/L
Thorium-234	U	52.1	+/-215	292	pCi/L
Tin-113	U	-2.55	+/-5.18	8.70	pCi/L
Uranium-235	U	1.42	+/-23.5	39.5	pCi/L
Uranium-238	U	52.1	+/-215	292	pCi/L
Yttrium-88	U	2.50	+/-6.19	10.9	pCi/L
Zinc-65	U	-5.65	+/-10.4	11.8	pCi/L
Zirconium-95	U	-3.83	+/-7.51	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.901	+/-1.73	3.94	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		526	+/-18.5	3.51	5.00	pCi/L					
Alpha	U	2.42	+/-2.85	3.51	5.00	pCi/L	JXH3	08/13/14	0735	1406420	3
Beta		515	+/-15.9	3.02	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	799	+/-121	152	300	pCi/L	MYM1	08/10/14	1049	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	352805009	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 10:28		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.54	+/-16.5	28.9		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	8.53	+/-10.7	17.2		pCi/L					
Antimony-124	U	0.266	+/-11.0	20.6		pCi/L					
Antimony-125	U	9.34	+/-8.73	16.8		pCi/L					
Barium-133	U	4.86	+/-5.99	8.19		pCi/L					
Barium-140	U	1.70	+/-14.1	27.2		pCi/L					
Beryllium-7	U	15.8	+/-36.0	66.7		pCi/L					
Bismuth-212	U	-26.5	+/-59.5	84.1		pCi/L					
Bismuth-214		15.1	+/-11.0	11.6		pCi/L					
Cerium-139	U	-2.95	+/-2.86	4.87		pCi/L					
Cerium-141	U	-1.37	+/-6.85	12.2		pCi/L					
Cerium-144	U	6.65	+/-19.0	32.5		pCi/L					
Cesium-134	U	1.06	+/-4.37	7.12		pCi/L					
Cesium-136	U	-1.87	+/-20.9	30.5		pCi/L					
Cesium-137	U	4.55	+/-3.71	7.18	10.0	pCi/L					
Chromium-51	U	-15.2	+/-47.0	79.7		pCi/L					
Cobalt-56	U	-2.24	+/-3.72	6.46		pCi/L					
Cobalt-57	U	0.919	+/-2.46	4.23		pCi/L					
Cobalt-58	U	-3.8	+/-4.02	6.76		pCi/L					
Cobalt-60	U	6.09	+/-4.90	8.68		pCi/L					
Europium-152	U	6.71	+/-9.95	17.3		pCi/L					
Europium-154	U	8.70	+/-10.5	21.2		pCi/L					
Europium-155	U	-11.8	+/-9.44	15.0		pCi/L					
Iridium-192	U	-0.904	+/-3.75	6.41		pCi/L					
Iron-59	U	-10.7	+/-9.92	15.9		pCi/L					
Lead-210	U	153	+/-315	291		pCi/L					
Lead-212	U	3.64	+/-7.52	12.0		pCi/L					
Lead-214	U	7.48	+/-9.02	13.8		pCi/L					
Manganese-54	U	-0.86	+/-3.30	5.92		pCi/L					
Mercury-203	U	2.48	+/-4.39	7.87		pCi/L					
Neodymium-147	U	9.86	+/-105	189		pCi/L					
Neptunium-239	U	-3.2	+/-25.3	42.4		pCi/L					
Niobium-94	U	3.51	+/-3.86	6.45		pCi/L					
Niobium-95	U	0.952	+/-4.71	7.66		pCi/L					
Potassium-40	U	-21.9	+/-50.0	86.5		pCi/L					
Promethium-144	U	0.310	+/-3.59	6.34		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.81	+/-5.27	7.57	pCi/L
Radium-228	U	-1.54	+/-16.5	28.9	pCi/L
Ruthenium-106	U	19.5	+/-32.6	60.4	pCi/L
Silver-110m	U	-2.56	+/-3.58	5.94	pCi/L
Sodium-22	U	3.09	+/-3.72	7.53	pCi/L
Thallium-208	U	1.84	+/-5.09	6.47	pCi/L
Thorium-230	U	-218	+/-894	1360	pCi/L
Thorium-234	U	29.4	+/-186	187	pCi/L
Tin-113	U	-0.257	+/-4.58	8.27	pCi/L
Uranium-235	U	7.80	+/-21.2	32.1	pCi/L
Uranium-238	U	29.4	+/-186	187	pCi/L
Yttrium-88	U	-1.5	+/-4.21	7.74	pCi/L
Zinc-65	U	2.12	+/-8.13	15.0	pCi/L
Zirconium-95	U	6.59	+/-8.79	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	13.2	+/-4.70	5.22	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	151	+/-6.44	4.78	5.00	pCi/L					
Alpha	12.7	+/-4.71	5.85	5.00	pCi/L	JXH3	08/12/14	1126	1406420	3
Beta	156	+/-6.40	4.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	276	+/-99.6	152	300	pCi/L	MYM1	08/10/14	1105	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	352805010	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	352805011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 10:25		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.2	+/-19.0	18.7		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	-18.2	+/-26.8	39.2		pCi/L					
Antimony-124	U	-0.603	+/-11.3	21.2		pCi/L					
Antimony-125	U	2.44	+/-11.9	16.3		pCi/L					
Barium-133	U	-1.34	+/-4.88	7.16		pCi/L					
Barium-140	U	5.76	+/-11.9	25.0		pCi/L					
Beryllium-7	U	-0.433	+/-35.2	63.8		pCi/L					
Bismuth-212	U	50.7	+/-66.8	98.5		pCi/L					
Bismuth-214	U	0.534	+/-9.66	15.1		pCi/L					
Cerium-139	U	-0.143	+/-3.13	5.54		pCi/L					
Cerium-141	U	1.07	+/-9.74	15.1		pCi/L					
Cerium-144	U	-19.7	+/-20.7	35.5		pCi/L					
Cesium-134	U	-3.95	+/-3.97	6.29		pCi/L					
Cesium-136	U	8.51	+/-15.9	27.8		pCi/L					
Cesium-137	U	-1.75	+/-3.25	5.54	10.0	pCi/L					
Chromium-51	U	-23.3	+/-48.2	80.9		pCi/L					
Cobalt-56	U	-4.75	+/-4.11	6.77		pCi/L					
Cobalt-57	U	1.85	+/-2.75	5.09		pCi/L					
Cobalt-58	U	-2.4	+/-4.99	7.80		pCi/L					
Cobalt-60	U	-2.02	+/-3.99	6.84		pCi/L					
Europium-152	U	3.38	+/-12.4	17.9		pCi/L					
Europium-154	U	1.80	+/-10.7	20.2		pCi/L					
Europium-155	U	6.95	+/-12.5	20.6		pCi/L					
Iridium-192	U	-0.427	+/-3.97	6.84		pCi/L					
Iron-59	U	3.74	+/-8.79	17.1		pCi/L					
Lead-210	U	-486	+/-1070	1540		pCi/L					
Lead-212	U	8.34	+/-12.2	10.5		pCi/L					
Lead-214	UI	0.00	+/-13.8	12.2		pCi/L					
Manganese-54	U	0.149	+/-3.64	6.77		pCi/L					
Mercury-203	U	-2.86	+/-4.57	7.65		pCi/L					
Neodymium-147	U	-21.3	+/-94.6	168		pCi/L					
Neptunium-239	U	-3.68	+/-29.0	51.7		pCi/L					
Niobium-94	U	-3.42	+/-3.47	5.60		pCi/L					
Niobium-95	U	1.56	+/-4.71	8.00		pCi/L					
Potassium-40	U	28.2	+/-46.9	76.3		pCi/L					
Promethium-144	U	3.82	+/-3.74	7.18		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 352805011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.21	+/-4.15	7.37	pCi/L
Radium-228	U	10.2	+/-19.0	18.7	pCi/L
Ruthenium-106	U	-31.2	+/-32.2	52.7	pCi/L
Silver-110m	U	2.15	+/-3.20	6.14	pCi/L
Sodium-22	U	0.529	+/-3.76	7.09	pCi/L
Thallium-208	U	-0.796	+/-5.23	8.32	pCi/L
Thorium-230	U	1220	+/-1510	2300	pCi/L
Thorium-234	U	37.7	+/-336	299	pCi/L
Tin-113	U	-2.14	+/-4.91	8.68	pCi/L
Uranium-235	U	-4.04	+/-26.2	40.0	pCi/L
Uranium-238	U	37.7	+/-336	299	pCi/L
Yttrium-88	U	-0.847	+/-4.94	9.12	pCi/L
Zinc-65	U	5.05	+/-7.76	13.9	pCi/L
Zirconium-95	U	5.06	+/-6.92	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.030	+/-1.89	4.17	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	-0.0188	+/-1.97	3.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	51.5	+/-89.8	153	300	pCi/L	MYM1	08/10/14	1121	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	352805012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 10:10		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.721	+/-13.8	21.9		pCi/L		MJH1	08/02/14	1033 1405429	1
Americium-241	U	-5.58	+/-21.5	32.1		pCi/L					
Antimony-124	U	1.32	+/-8.99	17.6		pCi/L					
Antimony-125	U	-0.789	+/-7.57	13.5		pCi/L					
Barium-133	U	-1.26	+/-4.02	6.23		pCi/L					
Barium-140	U	-10.9	+/-14.5	23.6		pCi/L					
Beryllium-7	U	18.8	+/-32.3	60.3		pCi/L					
Bismuth-212	U	17.6	+/-40.0	77.0		pCi/L					
Bismuth-214	U	-6.39	+/-8.75	12.7		pCi/L					
Cerium-139	U	-0.223	+/-3.70	4.53		pCi/L					
Cerium-141	U	-7.17	+/-7.70	11.3		pCi/L					
Cerium-144	U	-5.91	+/-17.6	30.6		pCi/L					
Cesium-134	U	2.38	+/-3.57	5.91		pCi/L					
Cesium-136	U	-1.75	+/-15.3	27.7		pCi/L					
Cesium-137	U	3.56	+/-4.30	5.21	10.0	pCi/L					
Chromium-51	U	-9.66	+/-39.7	71.2		pCi/L					
Cobalt-56	U	0.642	+/-3.72	6.94		pCi/L					
Cobalt-57	U	-1.28	+/-2.28	3.93		pCi/L					
Cobalt-58	U	0.0521	+/-3.19	5.96		pCi/L					
Cobalt-60	U	0.995	+/-3.12	6.19		pCi/L					
Europium-152	U	-3.43	+/-7.87	13.9		pCi/L					
Europium-154	U	11.6	+/-8.05	17.4		pCi/L					
Europium-155	U	2.89	+/-8.86	16.2		pCi/L					
Iridium-192	U	1.18	+/-3.14	5.85		pCi/L					
Iron-59	U	-3.6	+/-8.40	14.5		pCi/L					
Lead-210	U	-5.72	+/-831	1230		pCi/L					
Lead-212	U	4.38	+/-7.69	10.7		pCi/L					
Lead-214	U	9.44	+/-9.65	13.3		pCi/L					
Manganese-54	U	-1.62	+/-2.98	5.19		pCi/L					
Mercury-203	U	2.35	+/-4.58	7.20		pCi/L					
Neodymium-147	U	-72.9	+/-84.9	139		pCi/L					
Neptunium-239	U	-14	+/-23.3	38.2		pCi/L					
Niobium-94	U	-1.66	+/-2.70	4.73		pCi/L					
Niobium-95	U	-0.984	+/-4.67	7.53		pCi/L					
Potassium-40	U	64.1	+/-40.0	65.4		pCi/L					
Promethium-144	U	2.08	+/-2.96	5.77		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22 Project: WNUC00127  
Sample ID: 352805012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.92	+/-3.45	5.93	pCi/L
Radium-228	U	-0.721	+/-13.8	21.9	pCi/L
Ruthenium-106	U	-16.3	+/-29.0	48.4	pCi/L
Silver-110m	U	2.72	+/-3.74	5.04	pCi/L
Sodium-22	U	3.35	+/-3.04	6.16	pCi/L
Thallium-208		6.94	+/-4.66	5.52	pCi/L
Thorium-230	U	-138	+/-1200	1960	pCi/L
Thorium-234	U	128	+/-265	320	pCi/L
Tin-113	U	1.23	+/-4.17	6.86	pCi/L
Uranium-235	U	6.30	+/-23.9	32.1	pCi/L
Uranium-238	U	128	+/-265	320	pCi/L
Yttrium-88	U	-4.58	+/-5.27	6.64	pCi/L
Zinc-65	U	-1.99	+/-7.19	12.6	pCi/L
Zirconium-95	U	-3.73	+/-7.30	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		9.60	+/-4.22	3.89	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		59.7	+/-5.56	4.99	5.00	pCi/L					
Alpha	U	2.19	+/-2.96	5.00	5.00	pCi/L	JXH3	08/12/14	1126	1406420	3
Beta		57.8	+/-4.21	2.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-18.9	+/-83.7	149	300	pCi/L	MYM1	08/10/14	1137	1407033	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	352805012	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 23R	Project:	WNUC00127
Sample ID:	352805013	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 09:18		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.28	+/-16.6	24.8		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-5.6	+/-20.5	30.5		pCi/L					
Antimony-124	U	13.0	+/-10.9	23.2		pCi/L					
Antimony-125	U	4.71	+/-9.14	16.8		pCi/L					
Barium-133	U	-6.28	+/-4.48	7.32		pCi/L					
Barium-140	U	-5.96	+/-15.9	23.7		pCi/L					
Beryllium-7	U	-5.14	+/-38.1	67.1		pCi/L					
Bismuth-212	U	19.0	+/-45.4	84.0		pCi/L					
Bismuth-214	U	-2.39	+/-8.94	13.9		pCi/L					
Cerium-139	U	2.96	+/-3.42	6.01		pCi/L					
Cerium-141	U	-2.05	+/-9.13	14.1		pCi/L					
Cerium-144	U	-15.2	+/-23.9	38.0		pCi/L					
Cesium-134	U	2.28	+/-3.98	7.40		pCi/L					
Cesium-136	U	-16.1	+/-18.1	26.6		pCi/L					
Cesium-137	U	0.988	+/-3.42	6.23	10.0	pCi/L					
Chromium-51	U	16.7	+/-48.0	87.1		pCi/L					
Cobalt-56	U	0.520	+/-4.46	7.93		pCi/L					
Cobalt-57	U	1.22	+/-2.86	4.95		pCi/L					
Cobalt-58	U	-0.479	+/-4.46	7.79		pCi/L					
Cobalt-60	U	2.68	+/-3.67	7.38		pCi/L					
Europium-152	U	0.317	+/-10.3	18.3		pCi/L					
Europium-154	U	7.12	+/-10.6	21.1		pCi/L					
Europium-155	U	-12.4	+/-11.7	19.1		pCi/L					
Iridium-192	U	3.69	+/-3.77	7.08		pCi/L					
Iron-59	U	1.15	+/-8.78	16.6		pCi/L					
Lead-210	U	511	+/-674	582		pCi/L					
Lead-212	U	9.11	+/-9.42	10.2		pCi/L					
Lead-214	U	9.16	+/-8.17	15.3		pCi/L					
Manganese-54	U	-1.12	+/-3.34	5.74		pCi/L					
Mercury-203	U	-0.993	+/-4.41	7.76		pCi/L					
Neodymium-147	U	40.0	+/-98.6	182		pCi/L					
Neptunium-239	U	37.3	+/-28.8	50.7		pCi/L					
Niobium-94	U	2.52	+/-2.96	5.66		pCi/L					
Niobium-95	U	2.83	+/-4.13	7.45		pCi/L					
Potassium-40	U	-25.7	+/-44.8	72.8		pCi/L					
Promethium-144	U	-0.134	+/-3.42	6.03		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 352805013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.14	+/-5.28	7.93	pCi/L
Radium-228	U	-4.28	+/-16.6	24.8	pCi/L
Ruthenium-106	U	-13.8	+/-32.7	56.0	pCi/L
Silver-110m	U	-3.42	+/-3.48	5.64	pCi/L
Sodium-22	U	2.47	+/-3.76	7.46	pCi/L
Thallium-208	U	0.925	+/-5.19	5.80	pCi/L
Thorium-230	U	1810	+/-1580	1950	pCi/L
Thorium-234	U	148	+/-182	282	pCi/L
Tin-113	U	-0.115	+/-4.88	8.67	pCi/L
Uranium-235	U	2.84	+/-28.1	37.6	pCi/L
Uranium-238	U	148	+/-182	282	pCi/L
Yttrium-88	U	-1.17	+/-4.92	8.84	pCi/L
Zinc-65	U	-0.298	+/-7.83	12.5	pCi/L
Zirconium-95	U	3.54	+/-8.82	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.22	+/-1.88	3.34	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	1.81	+/-2.27	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	22.9	+/-87.0	151	300	pCi/L	MYM1	08/10/14	1154	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	352805014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 08:48		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.496	+/-18.3	27.6		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-28.1	+/-26.3	44.9		pCi/L					
Antimony-124	U	1.01	+/-10.4	19.7		pCi/L					
Antimony-125	U	3.47	+/-9.27	16.6		pCi/L					
Barium-133	U	-5.44	+/-4.63	7.58		pCi/L					
Barium-140	U	2.33	+/-17.3	32.5		pCi/L					
Beryllium-7	U	1.41	+/-42.5	63.5		pCi/L					
Bismuth-212	U	-18.9	+/-54.1	93.5		pCi/L					
Bismuth-214	U	5.56	+/-12.0	15.9		pCi/L					
Cerium-139	U	2.03	+/-3.65	6.37		pCi/L					
Cerium-141	U	7.39	+/-9.34	15.7		pCi/L					
Cerium-144	U	-27.6	+/-26.5	39.3		pCi/L					
Cesium-134	U	-0.935	+/-4.10	7.14		pCi/L					
Cesium-136	U	0.875	+/-18.6	33.8		pCi/L					
Cesium-137	U	2.33	+/-3.54	6.65	10.0	pCi/L					
Chromium-51	U	0.800	+/-52.0	91.4		pCi/L					
Cobalt-56	U	-2.04	+/-4.63	7.88		pCi/L					
Cobalt-57	U	1.25	+/-3.09	5.44		pCi/L					
Cobalt-58	U	-1.55	+/-4.08	7.02		pCi/L					
Cobalt-60	U	0.127	+/-4.95	7.57		pCi/L					
Europium-152	U	-2.6	+/-10.5	18.1		pCi/L					
Europium-154	U	6.48	+/-10.5	20.4		pCi/L					
Europium-155	U	-0.546	+/-12.6	21.9		pCi/L					
Iridium-192	U	0.0252	+/-4.14	7.27		pCi/L					
Iron-59	U	1.96	+/-9.35	17.4		pCi/L					
Lead-210	U	-670	+/-976	1510		pCi/L					
Lead-212	U	-6.2	+/-8.97	12.7		pCi/L					
Lead-214	U	-11.7	+/-10.1	14.3		pCi/L					
Manganese-54	U	0.343	+/-4.10	7.25		pCi/L					
Mercury-203	U	2.75	+/-4.91	8.86		pCi/L					
Neodymium-147	U	-22.4	+/-102	181		pCi/L					
Neptunium-239	U	-11.1	+/-37.1	54.8		pCi/L					
Niobium-94	U	3.57	+/-3.42	6.51		pCi/L					
Niobium-95	U	5.77	+/-4.43	8.64		pCi/L					
Potassium-40	U	-22.4	+/-48.0	80.0		pCi/L					
Promethium-144	U	1.35	+/-3.45	6.32		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	352805014	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.98	+/-4.40	8.11	pCi/L
Radium-228	U	0.496	+/-18.3	27.6	pCi/L
Ruthenium-106	U	3.93	+/-34.2	61.5	pCi/L
Silver-110m	U	-1.05	+/-3.79	6.20	pCi/L
Sodium-22	U	2.84	+/-3.69	7.27	pCi/L
Thallium-208	U	2.34	+/-4.15	5.75	pCi/L
Thorium-230	U	-2070	+/-1510	2540	pCi/L
Thorium-234	U	-138	+/-226	357	pCi/L
Tin-113	U	-2.68	+/-4.72	7.98	pCi/L
Uranium-235	U	-18.8	+/-29.0	39.4	pCi/L
Uranium-238	U	-138	+/-226	357	pCi/L
Yttrium-88	U	6.26	+/-5.03	10.6	pCi/L
Zinc-65	U	-0.0058	+/-7.35	13.4	pCi/L
Zirconium-95	U	5.43	+/-7.48	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.18	+/-1.73	3.01	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	U	0.0953	+/-1.92	3.68	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	38.5	+/-91.5	157	300	pCi/L	MYM1	08/10/14	1210	1407033	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	352805015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JUL-14 10:20		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	15.4	+/-15.1	29.5		pCi/L		MJH1	08/02/14	1034 1405429	1
Americium-241	U	-29.3	+/-17.7	29.4		pCi/L					
Antimony-124	U	-2.8	+/-9.09	16.7		pCi/L					
Antimony-125	U	0.0629	+/-9.81	17.5		pCi/L					
Barium-133	U	-1.17	+/-5.13	7.85		pCi/L					
Barium-140	U	0.179	+/-10.7	20.3		pCi/L					
Beryllium-7	U	-0.837	+/-34.9	62.0		pCi/L					
Bismuth-212	U	63.3	+/-51.6	109		pCi/L					
Bismuth-214	U	-4.35	+/-9.55	15.1		pCi/L					
Cerium-139	U	0.592	+/-3.70	5.66		pCi/L					
Cerium-141	U	-1.03	+/-7.33	12.7		pCi/L					
Cerium-144	U	0.941	+/-21.8	38.1		pCi/L					
Cesium-134	U	0.800	+/-3.85	7.20		pCi/L					
Cesium-136	U	-1.34	+/-11.1	18.1		pCi/L					
Cesium-137	U	6.00	+/-3.73	7.37	10.0	pCi/L					
Chromium-51	U	21.4	+/-45.2	82.7		pCi/L					
Cobalt-56	U	2.27	+/-4.33	8.20		pCi/L					
Cobalt-57	U	-1.84	+/-2.79	4.74		pCi/L					
Cobalt-58	U	0.359	+/-4.10	7.57		pCi/L					
Cobalt-60	U	1.20	+/-3.41	6.56		pCi/L					
Europium-152	U	0.658	+/-11.1	19.5		pCi/L					
Europium-154	U	-2.52	+/-9.23	16.5		pCi/L					
Europium-155	U	-8.29	+/-11.5	19.7		pCi/L					
Iridium-192	U	1.05	+/-4.13	7.48		pCi/L					
Iron-59	U	-1.83	+/-8.18	14.7		pCi/L					
Lead-210	U	417	+/-762	794		pCi/L					
Lead-212	U	3.44	+/-10.1	12.2		pCi/L					
Lead-214	U	8.84	+/-12.7	15.0		pCi/L					
Manganese-54	U	4.21	+/-2.85	6.82		pCi/L					
Mercury-203	U	3.53	+/-6.46	7.86		pCi/L					
Neodymium-147	U	18.7	+/-76.8	138		pCi/L					
Neptunium-239	U	6.89	+/-31.2	51.1		pCi/L					
Niobium-94	U	-0.249	+/-3.88	6.74		pCi/L					
Niobium-95	U	-2.29	+/-4.43	7.42		pCi/L					
Potassium-40	U	7.88	+/-48.5	85.1		pCi/L					
Promethium-144	U	3.18	+/-3.92	7.23		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 26  
Sample ID: 352805015

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.57	+/-4.43	8.06	pCi/L
Radium-228	U	15.4	+/-15.1	29.5	pCi/L
Ruthenium-106	U	2.47	+/-31.4	56.0	pCi/L
Silver-110m	U	0.579	+/-3.62	6.47	pCi/L
Sodium-22	U	-0.438	+/-3.20	5.83	pCi/L
Thallium-208	U	3.38	+/-4.24	6.51	pCi/L
Thorium-230	U	785	+/-1570	2070	pCi/L
Thorium-234	U	44.7	+/-190	276	pCi/L
Tin-113	U	-5.97	+/-5.74	8.34	pCi/L
Uranium-235	U	-14.7	+/-25.7	37.8	pCi/L
Uranium-238	U	44.7	+/-190	276	pCi/L
Yttrium-88	U	2.27	+/-3.28	7.14	pCi/L
Zinc-65	U	-7.45	+/-7.64	12.6	pCi/L
Zirconium-95	U	-4.05	+/-7.68	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.707	+/-1.41	2.73	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta		7.83	+/-3.35	4.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	78.2	+/-115	195	300	pCi/L	MYM1	08/10/14	1136	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	352805016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 10:04		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.62	+/-17.5	24.9		pCi/L		MJH1	08/02/14	1035 1405429	1
Americium-241	U	-16.3	+/-9.89	15.9		pCi/L					
Antimony-124	U	3.42	+/-9.23	17.8		pCi/L					
Antimony-125	U	-1.13	+/-7.59	13.6		pCi/L					
Barium-133	U	1.15	+/-3.90	6.31		pCi/L					
Barium-140	U	4.22	+/-11.6	22.2		pCi/L					
Beryllium-7	U	9.27	+/-28.8	53.1		pCi/L					
Bismuth-212	U	14.8	+/-49.8	75.7		pCi/L					
Bismuth-214	U	0.848	+/-12.6	10.5		pCi/L					
Cerium-139	U	-0.27	+/-3.00	4.56		pCi/L					
Cerium-141	U	3.56	+/-7.89	10.8		pCi/L					
Cerium-144	U	10.9	+/-17.0	30.5		pCi/L					
Cesium-134	U	1.24	+/-3.51	5.69		pCi/L					
Cesium-136	U	2.95	+/-12.5	23.6		pCi/L					
Cesium-137	U	-0.967	+/-3.09	5.38	10.0	pCi/L					
Chromium-51	U	15.6	+/-40.6	71.1		pCi/L					
Cobalt-56	U	-3.33	+/-4.63	6.41		pCi/L					
Cobalt-57	U	3.13	+/-2.17	4.03		pCi/L					
Cobalt-58	U	0.876	+/-3.37	5.46		pCi/L					
Cobalt-60	U	-3.22	+/-3.29	5.04		pCi/L					
Europium-152	U	3.02	+/-9.44	14.5		pCi/L					
Europium-154	U	-0.483	+/-9.13	15.6		pCi/L					
Europium-155	U	-6.64	+/-8.56	14.6		pCi/L					
Iridium-192	U	-4.67	+/-3.45	5.44		pCi/L					
Iron-59	U	-1.88	+/-6.62	12.0		pCi/L					
Lead-210	U	75.3	+/-284	253		pCi/L					
Lead-212	U	5.13	+/-8.55	10.2		pCi/L					
Lead-214	U	10.5	+/-9.89	13.1		pCi/L					
Manganese-54	U	-1.34	+/-2.91	4.95		pCi/L					
Mercury-203	UI	0.00	+/-5.52	6.32		pCi/L					
Neodymium-147	U	1.26	+/-73.9	133		pCi/L					
Neptunium-239	U	3.79	+/-21.9	38.8		pCi/L					
Niobium-94	U	0.0836	+/-2.78	4.96		pCi/L					
Niobium-95	U	0.423	+/-4.72	6.59		pCi/L					
Potassium-40	U	-39.3	+/-44.2	70.6		pCi/L					
Promethium-144	U	2.33	+/-2.83	5.36		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	352805016	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.539	+/-3.54	6.45	pCi/L
Radium-228	U	3.62	+/-17.5	24.9	pCi/L
Ruthenium-106	U	16.9	+/-27.0	50.5	pCi/L
Silver-110m	U	0.372	+/-3.04	5.47	pCi/L
Sodium-22	U	-0.171	+/-3.23	5.53	pCi/L
Thallium-208	U	0.477	+/-4.20	5.18	pCi/L
Thorium-230	U	-86.5	+/-740	1310	pCi/L
Thorium-234	U	-145	+/-107	168	pCi/L
Tin-113	U	0.0405	+/-3.84	6.95	pCi/L
Uranium-235	U	9.57	+/-21.2	31.1	pCi/L
Uranium-238	U	-145	+/-107	168	pCi/L
Yttrium-88	U	1.77	+/-3.45	7.15	pCi/L
Zinc-65	U	-5.12	+/-7.57	10.9	pCi/L
Zirconium-95	U	3.18	+/-5.82	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.54	+/-3.28	4.42	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	3.90	+/-2.49	3.68	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	26.8	+/-111	192	300	pCi/L	MYM1	08/10/14	1153	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	352805017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 11:02		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.60	+/-18.1	26.9		pCi/L		MJH1	08/02/14	1035 1405429	1
Americium-241	U	2.21	+/-5.00	8.10		pCi/L					
Antimony-124	U	-1.29	+/-10.2	19.1		pCi/L					
Antimony-125	U	7.49	+/-7.83	15.3		pCi/L					
Barium-133	U	-1.16	+/-3.89	6.60		pCi/L					
Barium-140	U	2.94	+/-14.9	29.3		pCi/L					
Beryllium-7	U	8.13	+/-36.3	66.5		pCi/L					
Bismuth-212	U	-39.6	+/-62.5	98.1		pCi/L					
Bismuth-214		23.3	+/-13.0	10.9		pCi/L					
Cerium-139	U	-1.2	+/-2.51	4.40		pCi/L					
Cerium-141	U	-0.945	+/-6.10	10.9		pCi/L					
Cerium-144	U	-6.62	+/-16.0	26.5		pCi/L					
Cesium-134	U	-0.989	+/-3.58	6.47		pCi/L					
Cesium-136	U	-0.257	+/-21.2	33.1		pCi/L					
Cesium-137	U	0.332	+/-3.53	6.35	10.0	pCi/L					
Chromium-51	U	29.9	+/-46.5	84.1		pCi/L					
Cobalt-56	U	2.69	+/-3.99	7.90		pCi/L					
Cobalt-57	U	0.473	+/-1.98	3.42		pCi/L					
Cobalt-58	U	-1.59	+/-4.40	7.84		pCi/L					
Cobalt-60	U	-2.55	+/-3.59	6.19		pCi/L					
Europium-152	U	-0.93	+/-9.41	16.2		pCi/L					
Europium-154	U	7.30	+/-11.9	20.6		pCi/L					
Europium-155	U	1.83	+/-7.30	12.7		pCi/L					
Iridium-192	U	-1.06	+/-3.57	6.09		pCi/L					
Iron-59	U	4.69	+/-8.54	16.8		pCi/L					
Lead-210	U	44.5	+/-91.3	76.8		pCi/L					
Lead-212	U	6.56	+/-6.80	11.1		pCi/L					
Lead-214	U	-2.89	+/-9.50	13.5		pCi/L					
Manganese-54	U	-2.68	+/-4.24	6.14		pCi/L					
Mercury-203	U	-1.94	+/-3.89	6.60		pCi/L					
Neodymium-147	U	26.2	+/-103	190		pCi/L					
Neptunium-239	U	-1.86	+/-19.8	33.6		pCi/L					
Niobium-94	U	2.53	+/-3.10	5.91		pCi/L					
Niobium-95	U	3.19	+/-4.05	8.01		pCi/L					
Potassium-40	U	4.64	+/-71.8	69.9		pCi/L					
Promethium-144	U	1.02	+/-3.51	6.36		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28 Project: WNUC00127  
Sample ID: 352805017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.06	+/-3.94	7.27	pCi/L
Radium-228	U	3.60	+/-18.1	26.9	pCi/L
Ruthenium-106	U	-4.87	+/-32.8	57.7	pCi/L
Silver-110m	U	0.173	+/-3.42	6.12	pCi/L
Sodium-22	U	-1.42	+/-4.78	7.29	pCi/L
Thallium-208	U	1.69	+/-4.07	6.61	pCi/L
Thorium-230	U	84.0	+/-497	782	pCi/L
Thorium-234	U	41.0	+/-65.9	121	pCi/L
Tin-113	U	-0.512	+/-4.55	8.22	pCi/L
Uranium-235	U	-15.9	+/-20.2	28.8	pCi/L
Uranium-238	U	41.0	+/-65.9	121	pCi/L
Yttrium-88	U	-6.11	+/-4.38	6.50	pCi/L
Zinc-65	U	-5.87	+/-9.74	13.6	pCi/L
Zirconium-95	U	3.52	+/-7.40	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	13.0	+/-4.30	4.48	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	33.2	+/-4.04	4.95	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.4	+/-105	182	300	pCi/L	MYM1	08/10/14	1210	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	352805018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 09:28		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	0.567	+/-15.7	23.4		pCi/L		MJH1	08/02/14	1035	1405429	1
Americium-241	U	-0.00701	+/-9.87	15.5		pCi/L						
Antimony-124	U	-5.75	+/-11.1	15.7		pCi/L						
Antimony-125	U	-0.272	+/-7.58	13.2		pCi/L						
Barium-133	U	-2.12	+/-4.16	6.10		pCi/L						
Barium-140	U	4.67	+/-14.7	27.9		pCi/L						
Beryllium-7	U	3.68	+/-33.8	58.7		pCi/L						
Bismuth-212	U	41.7	+/-42.5	81.6		pCi/L						
Bismuth-214	U	8.90	+/-11.4	10.5		pCi/L						
Cerium-139	U	-0.76	+/-2.79	4.61		pCi/L						
Cerium-141	U	-0.407	+/-9.06	12.0		pCi/L						
Cerium-144	U	-8.22	+/-16.9	27.9		pCi/L						
Cesium-134	U	6.09	+/-3.62	6.62		pCi/L						
Cesium-136	U	-4.0	+/-12.9	23.5		pCi/L						
Cesium-137	U	-0.327	+/-3.04	5.44	10.0	pCi/L						
Chromium-51	U	-7.3	+/-43.1	75.0		pCi/L						
Cobalt-56	U	2.81	+/-3.65	6.92		pCi/L						
Cobalt-57	U	0.838	+/-2.17	3.76		pCi/L						
Cobalt-58	U	0.315	+/-3.72	6.34		pCi/L						
Cobalt-60	U	-3.5	+/-3.06	4.91		pCi/L						
Europium-152	U	-1.9	+/-8.59	14.9		pCi/L						
Europium-154	U	4.60	+/-8.98	17.4		pCi/L						
Europium-155	U	5.74	+/-8.25	14.6		pCi/L						
Iridium-192	U	-0.209	+/-3.40	5.95		pCi/L						
Iron-59	U	5.43	+/-7.73	15.2		pCi/L						
Lead-210	U	147	+/-303	275		pCi/L						
Lead-212	U	6.33	+/-8.41	11.1		pCi/L						
Lead-214	U	4.04	+/-13.1	13.1		pCi/L						
Manganese-54	U	-1.65	+/-3.04	5.18		pCi/L						
Mercury-203	U	-1.26	+/-4.29	6.51		pCi/L						
Neodymium-147	U	29.8	+/-91.7	171		pCi/L						
Neptunium-239	U	-12.8	+/-23.1	38.3		pCi/L						
Niobium-94	U	-1.82	+/-2.73	4.65		pCi/L						
Niobium-95	U	-1.57	+/-3.53	6.10		pCi/L						
Potassium-40	U	42.6	+/-63.4	55.5		pCi/L						
Promethium-144	U	0.974	+/-2.90	5.32		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	352805018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.24	+/-3.62	6.01	pCi/L
Radium-228	U	0.567	+/-15.7	23.4	pCi/L
Ruthenium-106	U	-13.1	+/-27.4	47.9	pCi/L
Silver-110m	U	0.237	+/-2.93	5.33	pCi/L
Sodium-22	U	2.38	+/-3.15	6.24	pCi/L
Thallium-208	U	1.68	+/-3.93	5.42	pCi/L
Thorium-230	U	110	+/-774	1210	pCi/L
Thorium-234	U	33.5	+/-143	143	pCi/L
Tin-113	U	2.38	+/-3.95	7.16	pCi/L
Uranium-235	U	3.18	+/-26.3	27.6	pCi/L
Uranium-238	U	33.5	+/-143	143	pCi/L
Yttrium-88	U	0.0154	+/-3.21	6.16	pCi/L
Zinc-65	U	2.03	+/-6.44	10.9	pCi/L
Zirconium-95	U	2.30	+/-6.33	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	6.11	+/-3.83	4.26	5.00	pCi/L	JXH3	08/11/14	1444	1406420	2
Beta	10.4	+/-3.39	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	56.1	+/-110	187	300	pCi/L	MYM1	08/10/14	1227	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	352805019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 09:50		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis											
Alphaspec U, Liquid "As Received"											
Uranium-233/234		30.0	+/-2.93	0.571	1.00	pCi/L		HAKB	08/15/14	0954 1411601	1
Uranium-235/236		1.28	+/-0.693	0.273	1.00	pCi/L					
Uranium-238		9.27	+/-1.63	0.354	1.00	pCi/L					
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.12	+/-16.7	21.2		pCi/L		MJH1	08/02/14	1036 1405429	2
Americium-241	U	5.21	+/-19.1	30.2		pCi/L					
Antimony-124	U	7.18	+/-9.99	18.7		pCi/L					
Antimony-125	U	-7.07	+/-8.53	13.8		pCi/L					
Barium-133	UI	0.00	+/-4.77	6.81		pCi/L					
Barium-140	U	6.85	+/-13.3	27.1		pCi/L					
Beryllium-7	U	25.3	+/-32.7	62.2		pCi/L					
Bismuth-212	U	5.79	+/-40.8	74.1		pCi/L					
Bismuth-214		12.3	+/-11.0	9.71		pCi/L					
Cerium-139	U	0.356	+/-2.70	4.86		pCi/L					
Cerium-141	U	5.37	+/-7.90	13.0		pCi/L					
Cerium-144	U	5.38	+/-18.2	33.2		pCi/L					
Cesium-134	U	-2.01	+/-3.41	5.76		pCi/L					
Cesium-136	U	19.5	+/-14.2	28.3		pCi/L					
Cesium-137	U	1.07	+/-4.26	5.52	10.0	pCi/L					
Chromium-51	U	16.2	+/-45.1	80.2		pCi/L					
Cobalt-56	U	-1.93	+/-4.27	6.15		pCi/L					
Cobalt-57	U	1.05	+/-2.52	4.32		pCi/L					
Cobalt-58	U	1.35	+/-3.27	6.14		pCi/L					
Cobalt-60	U	-1.56	+/-2.67	4.60		pCi/L					
Europium-152	U	6.97	+/-8.88	15.2		pCi/L					
Europium-154	U	3.69	+/-9.28	17.9		pCi/L					
Europium-155	U	5.26	+/-10.4	18.0		pCi/L					
Iridium-192	U	-0.806	+/-3.59	6.17		pCi/L					
Iron-59	U	-1.66	+/-8.07	14.6		pCi/L					
Lead-210	U	-915	+/-734	1010		pCi/L					
Lead-212	U	9.79	+/-8.36	11.0		pCi/L					
Lead-214	U	11.7	+/-12.9	13.4		pCi/L					
Manganese-54	U	-3.69	+/-3.10	4.87		pCi/L					
Mercury-203	U	-3.02	+/-4.88	7.12		pCi/L					
Neodymium-147	U	-8.56	+/-86.8	157		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 352805019

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Neptunium-239	U	6.56	+/-24.7	42.2	pCi/L
Niobium-94	U	2.44	+/-3.09	5.23	pCi/L
Niobium-95	U	0.265	+/-3.65	6.58	pCi/L
Potassium-40	U	5.45	+/-45.8	80.3	pCi/L
Promethium-144	U	3.06	+/-5.51	5.64	pCi/L
Promethium-146	U	-1.58	+/-3.30	5.85	pCi/L
Radium-228	U	6.12	+/-16.7	21.2	pCi/L
Ruthenium-106	U	-22.5	+/-26.4	44.3	pCi/L
Silver-110m	U	4.40	+/-6.10	5.28	pCi/L
Sodium-22	U	1.55	+/-3.27	6.35	pCi/L
Thallium-208	U	3.08	+/-5.01	5.06	pCi/L
Thorium-230	U	1060	+/-1350	1980	pCi/L
Thorium-234	U	118	+/-245	233	pCi/L
Tin-113	U	0.586	+/-4.15	7.26	pCi/L
Uranium-235	U	2.18	+/-24.1	33.0	pCi/L
Uranium-238	U	118	+/-245	233	pCi/L
Yttrium-88	U	0.637	+/-3.60	7.11	pCi/L
Zinc-65	U	-1.87	+/-7.30	11.2	pCi/L
Zirconium-95	U	-1.82	+/-6.01	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	48.1	+/-10.0	4.44	5.00	pCi/L	JXH3	08/12/14	0848	1406421	3
Beta	60.4	+/-6.74	4.10	5.00	pCi/L					
Alpha	44.4	+/-9.82	4.99	5.00	pCi/L	JXH3	08/13/14	1018	1406421	4
Beta	58.1	+/-6.59	3.67	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	133	+/-113	187	300	pCi/L	MYM1	08/10/14	1243	1407037	5
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# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 352805019

Project: WNUC00127  
Client ID: WNUC001

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	DOE EML HASL-300, U-02-RC Modified				
2	EPA 901.1				
3	EPA 900.0/SW846 9310				
4	EPA 900.0/SW846 9310				
5	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"			97.0	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	352805020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 14:26		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-12.9	+/-13.6	21.2		pCi/L		MJH1	08/02/14	1036 1405429	1
Americium-241	U	-7.92	+/-14.7	25.2		pCi/L					
Antimony-124	U	-4.07	+/-8.45	15.2		pCi/L					
Antimony-125	U	0.395	+/-7.37	13.2		pCi/L					
Barium-133	U	-2.98	+/-4.38	6.76		pCi/L					
Barium-140	U	-4.08	+/-12.8	22.5		pCi/L					
Beryllium-7	U	11.4	+/-30.1	54.9		pCi/L					
Bismuth-212	U	-48.3	+/-44.8	64.0		pCi/L					
Bismuth-214	U	-3.87	+/-8.47	11.6		pCi/L					
Cerium-139	U	0.624	+/-3.12	4.77		pCi/L					
Cerium-141	U	1.45	+/-8.06	12.3		pCi/L					
Cerium-144	U	19.2	+/-24.3	31.8		pCi/L					
Cesium-134	U	0.244	+/-3.68	5.95		pCi/L					
Cesium-136	U	3.82	+/-12.8	24.5		pCi/L					
Cesium-137	U	4.88	+/-3.08	6.06	10.0	pCi/L					
Chromium-51	U	9.92	+/-43.4	78.4		pCi/L					
Cobalt-56	U	1.51	+/-4.71	7.11		pCi/L					
Cobalt-57	U	0.479	+/-2.61	4.03		pCi/L					
Cobalt-58	U	-4.07	+/-3.75	5.18		pCi/L					
Cobalt-60	U	0.332	+/-3.07	5.71		pCi/L					
Europium-152	U	-0.097	+/-8.09	14.5		pCi/L					
Europium-154	U	9.05	+/-8.63	17.6		pCi/L					
Europium-155	U	2.39	+/-9.39	16.4		pCi/L					
Iridium-192	U	-1.34	+/-3.46	6.06		pCi/L					
Iron-59	U	0.187	+/-8.23	15.1		pCi/L					
Lead-210	UI	0.00	+/-606	633		pCi/L					
Lead-212	U	2.69	+/-9.30	10.8		pCi/L					
Lead-214	U	-1.98	+/-8.72	12.5		pCi/L					
Manganese-54	U	-1.73	+/-2.64	4.62		pCi/L					
Mercury-203	U	0.930	+/-4.34	6.96		pCi/L					
Neodymium-147	U	-9.35	+/-99.4	174		pCi/L					
Neptunium-239	U	-0.307	+/-23.6	40.6		pCi/L					
Niobium-94	U	-1.48	+/-2.86	4.77		pCi/L					
Niobium-95	U	4.52	+/-4.71	5.19		pCi/L					
Potassium-40	U	9.82	+/-48.7	46.7		pCi/L					
Promethium-144	U	0.402	+/-3.30	5.10		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32 Project: WNUC00127  
Sample ID: 352805020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.46	+/-3.57	6.16	pCi/L
Radium-228	U	-12.9	+/-13.6	21.2	pCi/L
Ruthenium-106	U	-13.7	+/-27.2	45.9	pCi/L
Silver-110m	U	-2.94	+/-3.23	5.23	pCi/L
Sodium-22	U	2.26	+/-3.14	6.21	pCi/L
Thallium-208	U	0.343	+/-4.96	4.91	pCi/L
Thorium-230	U	-1590	+/-1130	1660	pCi/L
Thorium-234	U	55.5	+/-176	256	pCi/L
Tin-113	U	0.521	+/-3.83	6.90	pCi/L
Uranium-235	U	31.4	+/-29.5	33.5	pCi/L
Uranium-238	U	55.5	+/-176	256	pCi/L
Yttrium-88	U	0.148	+/-3.26	5.64	pCi/L
Zinc-65	U	-0.55	+/-6.75	10.7	pCi/L
Zirconium-95	U	1.52	+/-5.65	10.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.597	+/-2.82	4.74	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta		253	+/-13.4	4.20	5.00	pCi/L					
Alpha		5.48	+/-4.23	4.73	5.00	pCi/L	JXH3	08/13/14	1021	1406421	3
Beta		235	+/-11.9	3.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	477	+/-128	188	300	pCi/L	MYM1	08/10/14	1300	1407037	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 352805020

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	352805021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 11:02		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.89	+/-17.4	24.5		pCi/L		MJH1	08/02/14	1038 1405431	1
Americium-241	U	-16.8	+/-19.9	30.5		pCi/L					
Antimony-124	U	-1.5	+/-8.62	16.1		pCi/L					
Antimony-125	U	-5.4	+/-8.49	12.4		pCi/L					
Barium-133	U	0.268	+/-3.79	6.09		pCi/L					
Barium-140	U	4.10	+/-15.3	26.6		pCi/L					
Beryllium-7	U	16.1	+/-29.8	55.8		pCi/L					
Bismuth-212	U	3.09	+/-47.8	69.9		pCi/L					
Bismuth-214	U	1.11	+/-9.72	9.78		pCi/L					
Cerium-139	U	-0.802	+/-2.75	4.67		pCi/L					
Cerium-141	U	-20.8	+/-8.47	11.4		pCi/L					
Cerium-144	U	-10.6	+/-19.0	28.5		pCi/L					
Cesium-134	U	1.13	+/-2.83	5.52		pCi/L					
Cesium-136	U	-2.49	+/-11.8	21.4		pCi/L					
Cesium-137	U	-1.35	+/-3.39	5.24	10.0	pCi/L					
Chromium-51	U	39.2	+/-50.0	72.5		pCi/L					
Cobalt-56	U	-1.49	+/-3.32	5.87		pCi/L					
Cobalt-57	U	0.786	+/-2.16	3.88		pCi/L					
Cobalt-58	U	0.781	+/-3.38	6.42		pCi/L					
Cobalt-60	U	1.90	+/-3.07	6.32		pCi/L					
Europium-152	U	1.37	+/-8.13	14.9		pCi/L					
Europium-154	U	-4.08	+/-8.68	14.9		pCi/L					
Europium-155	U	5.70	+/-10.1	16.6		pCi/L					
Iridium-192	U	1.31	+/-3.61	5.95		pCi/L					
Iron-59	U	-2.89	+/-8.58	12.8		pCi/L					
Lead-210	U	-328	+/-831	1180		pCi/L					
Lead-212	U	0.0286	+/-8.00	8.81		pCi/L					
Lead-214	U	2.22	+/-9.21	10.8		pCi/L					
Manganese-54	U	-2.37	+/-2.70	4.55		pCi/L					
Mercury-203	U	-0.232	+/-3.68	6.68		pCi/L					
Neodymium-147	U	27.8	+/-103	166		pCi/L					
Neptunium-239	U	4.65	+/-22.4	40.0		pCi/L					
Niobium-94	U	1.24	+/-3.05	5.77		pCi/L					
Niobium-95	U	-1.38	+/-4.54	6.80		pCi/L					
Potassium-40	U	17.5	+/-58.4	53.4		pCi/L					
Promethium-144	U	0.190	+/-3.28	6.04		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 33 Project: WNUC00127  
Sample ID: 352805021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0029	+/-4.07	6.39	pCi/L
Radium-228	U	2.89	+/-17.4	24.5	pCi/L
Ruthenium-106	U	-20.5	+/-27.7	45.4	pCi/L
Silver-110m	U	-0.0157	+/-2.94	5.19	pCi/L
Sodium-22	U	-1.45	+/-3.08	5.28	pCi/L
Thallium-208	U	4.27	+/-4.14	5.38	pCi/L
Thorium-230	U	747	+/-1360	1990	pCi/L
Thorium-234	U	76.9	+/-235	226	pCi/L
Tin-113	U	2.22	+/-3.95	7.39	pCi/L
Uranium-235	U	-28.8	+/-22.0	31.9	pCi/L
Uranium-238	U	76.9	+/-235	226	pCi/L
Yttrium-88	U	3.09	+/-3.38	7.17	pCi/L
Zinc-65	U	-0.839	+/-6.25	9.82	pCi/L
Zirconium-95	U	-0.663	+/-6.46	11.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.18	+/-2.99	3.30	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta	6.38	+/-2.95	4.04	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	69.9	+/-108	184	300	pCi/L	MYM1	08/10/14	1317	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	352805022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	07-JUL-14 08:25		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.47	+/-21.7	21.9		pCi/L		MJH1	08/04/14	1614 1405431	1
Americium-241	U	-7.34	+/-12.2	19.0		pCi/L					
Antimony-124	U	4.91	+/-9.04	17.9		pCi/L					
Antimony-125	U	0.891	+/-7.12	12.7		pCi/L					
Barium-133	U	1.32	+/-3.30	6.00		pCi/L					
Barium-140	U	6.04	+/-16.3	31.3		pCi/L					
Beryllium-7	U	24.0	+/-30.1	55.8		pCi/L					
Bismuth-212	U	38.3	+/-43.2	75.0		pCi/L					
Bismuth-214	U	0.0521	+/-7.96	9.80		pCi/L					
Cerium-139	U	-2.68	+/-2.69	4.37		pCi/L					
Cerium-141	U	2.10	+/-10.5	10.9		pCi/L					
Cerium-144	U	-6.69	+/-16.9	27.3		pCi/L					
Cesium-134	U	-3.6	+/-3.36	4.80		pCi/L					
Cesium-136	U	-4.39	+/-15.7	27.4		pCi/L					
Cesium-137	U	-0.929	+/-4.32	6.21	10.0	pCi/L					
Chromium-51	U	2.36	+/-42.0	75.1		pCi/L					
Cobalt-56	U	2.45	+/-1.80	6.04		pCi/L					
Cobalt-57	U	0.496	+/-2.07	3.64		pCi/L					
Cobalt-58	U	1.03	+/-3.17	5.95		pCi/L					
Cobalt-60	U	-0.835	+/-2.80	5.07		pCi/L					
Europium-152	U	-3.85	+/-7.85	13.6		pCi/L					
Europium-154	U	7.02	+/-8.26	16.8		pCi/L					
Europium-155	U	-1.9	+/-7.89	13.7		pCi/L					
Iridium-192	U	0.458	+/-3.15	5.66		pCi/L					
Iron-59	U	2.95	+/-7.10	13.5		pCi/L					
Lead-210	U	284	+/-459	453		pCi/L					
Lead-212	U	1.98	+/-8.74	10.1		pCi/L					
Lead-214	U	-3.35	+/-7.86	10.4		pCi/L					
Manganese-54	U	1.09	+/-2.82	5.27		pCi/L					
Mercury-203	U	1.98	+/-4.51	6.69		pCi/L					
Neodymium-147	U	-11.9	+/-114	173		pCi/L					
Neptunium-239	U	-9.05	+/-21.6	36.9		pCi/L					
Niobium-94	U	-1.2	+/-2.57	4.51		pCi/L					
Niobium-95	UI	0.00	+/-4.35	5.86		pCi/L					
Potassium-40	U	15.6	+/-47.3	43.8		pCi/L					
Promethium-144	U	0.0454	+/-4.57	5.02		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Project: WNUC00127  
Sample ID: 352805022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.527	+/-3.37	5.86	pCi/L
Radium-228	U	8.47	+/-21.7	21.9	pCi/L
Ruthenium-106	U	33.8	+/-39.0	44.2	pCi/L
Silver-110m	U	-3.68	+/-2.90	4.80	pCi/L
Sodium-22	U	2.64	+/-2.95	6.01	pCi/L
Thallium-208	U	1.28	+/-5.21	4.33	pCi/L
Thorium-230	U	1050	+/-1370	1470	pCi/L
Thorium-234	U	10.1	+/-137	166	pCi/L
Tin-113	U	-0.0924	+/-3.66	6.47	pCi/L
Uranium-235	U	5.04	+/-25.1	28.4	pCi/L
Uranium-238	U	10.1	+/-137	166	pCi/L
Yttrium-88	U	0.547	+/-4.02	6.64	pCi/L
Zinc-65	U	-3.25	+/-5.97	10.1	pCi/L
Zirconium-95	U	-0.921	+/-6.82	10.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.642	+/-2.45	4.73	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta	U	1.74	+/-2.43	4.16	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	10.2	+/-107	187	300	pCi/L	MYM1	08/10/14	1334	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	352805023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:24		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.31	+/-17.9	31.6		pCi/L		MJH1	08/05/14	1452 1405431	1
Americium-241	U	4.57	+/-30.0	46.8		pCi/L					
Antimony-124	U	9.58	+/-9.89	23.2		pCi/L					
Antimony-125	U	3.77	+/-12.7	21.4		pCi/L					
Barium-133	U	-6.47	+/-5.32	8.33		pCi/L					
Barium-140	U	-0.641	+/-17.7	34.5		pCi/L					
Beryllium-7	U	-26.5	+/-41.5	71.8		pCi/L					
Bismuth-212	U	82.8	+/-80.5	121		pCi/L					
Bismuth-214	U	8.06	+/-15.1	17.3		pCi/L					
Cerium-139	U	-1.58	+/-3.90	6.79		pCi/L					
Cerium-141	U	-0.522	+/-9.57	17.1		pCi/L					
Cerium-144	U	-4.64	+/-24.0	42.8		pCi/L					
Cesium-134	U	-0.321	+/-4.69	7.23		pCi/L					
Cesium-136	U	-0.825	+/-25.5	40.4		pCi/L					
Cesium-137	U	1.72	+/-4.45	8.28	10.0	pCi/L					
Chromium-51	U	-18.6	+/-54.7	93.2		pCi/L					
Cobalt-56	U	1.44	+/-4.50	8.76		pCi/L					
Cobalt-57	U	-2.2	+/-3.20	5.58		pCi/L					
Cobalt-58	U	-4.67	+/-4.61	7.73		pCi/L					
Cobalt-60	U	-2.22	+/-4.49	7.73		pCi/L					
Europium-152	U	-5.19	+/-11.6	19.5		pCi/L					
Europium-154	U	9.16	+/-9.88	21.7		pCi/L					
Europium-155	U	4.80	+/-13.8	23.8		pCi/L					
Iridium-192	U	1.29	+/-4.46	7.96		pCi/L					
Iron-59	U	-5.34	+/-12.0	18.5		pCi/L					
Lead-210	U	655	+/-1000	1640		pCi/L					
Lead-212		14.6	+/-13.2	11.3		pCi/L					
Lead-214	U	3.51	+/-11.1	17.3		pCi/L					
Manganese-54	U	-0.791	+/-3.51	6.49		pCi/L					
Mercury-203	U	3.47	+/-6.18	9.93		pCi/L					
Neodymium-147	U	-1.52	+/-124	226		pCi/L					
Neptunium-239	U	-26.4	+/-31.7	55.0		pCi/L					
Niobium-94	U	2.34	+/-3.62	6.95		pCi/L					
Niobium-95	U	0.480	+/-5.67	10.2		pCi/L					
Potassium-40	U	10.0	+/-61.3	102		pCi/L					
Promethium-144	U	-0.355	+/-4.45	7.86		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 39 Project: WNUC00127  
Sample ID: 352805023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.82	+/-4.59	8.67	pCi/L
Radium-228	U	3.31	+/-17.9	31.6	pCi/L
Ruthenium-106	U	8.50	+/-77.0	72.6	pCi/L
Silver-110m	U	-3.25	+/-5.20	7.51	pCi/L
Sodium-22	U	3.25	+/-3.51	8.39	pCi/L
Thallium-208	U	6.69	+/-7.96	6.69	pCi/L
Thorium-230	U	-516	+/-1840	2750	pCi/L
Thorium-234	U	139	+/-311	359	pCi/L
Tin-113	U	0.480	+/-5.38	9.93	pCi/L
Uranium-235	U	0.546	+/-28.6	46.1	pCi/L
Uranium-238	U	139	+/-311	359	pCi/L
Yttrium-88	U	-2.26	+/-5.12	9.18	pCi/L
Zinc-65	U	-0.12	+/-9.01	16.7	pCi/L
Zirconium-95	U	-9.31	+/-8.47	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.17	+/-4.11	4.60	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta	17.4	+/-3.93	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.0	+/-111	192	300	pCi/L	MYM1	08/10/14	1351	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 352805024  
Matrix: Ground Water  
Collect Date: 14-JUL-14 10:05  
Receive Date: 16-JUL-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.79	+/-14.9	24.0		pCi/L		MJH1	08/04/14	1615 1405431	1
Americium-241	U	7.78	+/-17.7	27.4		pCi/L					
Antimony-124	U	-0.876	+/-9.53	15.0		pCi/L					
Antimony-125	U	-0.884	+/-7.94	14.0		pCi/L					
Barium-133	U	4.06	+/-5.81	6.71		pCi/L					
Barium-140	U	6.94	+/-11.0	22.1		pCi/L					
Beryllium-7	U	22.2	+/-33.5	58.7		pCi/L					
Bismuth-212	U	-22.8	+/-49.7	74.1		pCi/L					
Bismuth-214	U	8.32	+/-7.69	12.8		pCi/L					
Cerium-139	U	1.08	+/-2.99	5.12		pCi/L					
Cerium-141	U	4.35	+/-7.34	12.7		pCi/L					
Cerium-144	U	4.47	+/-20.1	34.3		pCi/L					
Cesium-134	U	-0.841	+/-3.28	5.67		pCi/L					
Cesium-136	U	-4.21	+/-11.8	21.1		pCi/L					
Cesium-137	U	-0.766	+/-3.50	5.22	10.0	pCi/L					
Chromium-51	U	-8.61	+/-40.4	70.9		pCi/L					
Cobalt-56	U	-1.76	+/-3.86	6.50		pCi/L					
Cobalt-57	U	-2.16	+/-2.59	4.24		pCi/L					
Cobalt-58	U	3.07	+/-3.56	6.75		pCi/L					
Cobalt-60	U	0.474	+/-3.82	5.62		pCi/L					
Europium-152	U	-0.978	+/-9.58	15.9		pCi/L					
Europium-154	U	-2.13	+/-9.07	16.4		pCi/L					
Europium-155	U	6.47	+/-11.4	17.5		pCi/L					
Iridium-192	U	3.58	+/-3.53	6.56		pCi/L					
Iron-59	U	0.0553	+/-7.77	14.3		pCi/L					
Lead-210	U	-661	+/-567	768		pCi/L					
Lead-212	UI	0.00	+/-11.9	11.1		pCi/L					
Lead-214	UI	0.00	+/-14.9	13.3		pCi/L					
Manganese-54	U	-0.162	+/-2.87	5.05		pCi/L					
Mercury-203	U	4.63	+/-3.73	7.01		pCi/L					
Neodymium-147	U	28.6	+/-69.7	121		pCi/L					
Neptunium-239	U	3.77	+/-26.6	45.5		pCi/L					
Niobium-94	U	1.52	+/-2.80	5.15		pCi/L					
Niobium-95	U	-0.866	+/-3.52	5.72		pCi/L					
Potassium-40	U	9.61	+/-46.3	79.7		pCi/L					
Promethium-144	U	0.408	+/-2.91	5.20		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 352805024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.471	+/-3.81	6.69	pCi/L
Radium-228	U	-6.79	+/-14.9	24.0	pCi/L
Ruthenium-106	U	10.6	+/-27.8	49.4	pCi/L
Silver-110m	U	0.700	+/-3.35	5.24	pCi/L
Sodium-22	U	-0.0599	+/-3.15	5.83	pCi/L
Thallium-208	U	2.71	+/-4.58	6.73	pCi/L
Thorium-230	U	-89.9	+/-1210	1810	pCi/L
Thorium-234	U	100	+/-183	223	pCi/L
Tin-113	U	0.833	+/-4.28	7.66	pCi/L
Uranium-235	U	15.4	+/-20.7	35.9	pCi/L
Uranium-238	U	100	+/-183	223	pCi/L
Yttrium-88	U	2.02	+/-4.74	8.13	pCi/L
Zinc-65	U	0.144	+/-6.57	12.1	pCi/L
Zirconium-95	U	12.1	+/-11.8	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.19	+/-2.75	3.45	5.00	pCi/L	JXH3	08/12/14	0848	1406421	2
Beta	24.3	+/-4.29	4.97	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	54.6	+/-115	197	300	pCi/L	MYM1	08/10/14	1408	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	352805025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 11:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.39	+/-17.6	21.1		pCi/L		MJH1	08/04/14	1615 1405431	1
Americium-241	U	7.35	+/-9.12	15.0		pCi/L					
Antimony-124	U	2.47	+/-7.99	15.3		pCi/L					
Antimony-125	U	0.0401	+/-6.87	12.4		pCi/L					
Barium-133	U	-2.78	+/-3.25	5.59		pCi/L					
Barium-140	U	9.49	+/-11.7	21.7		pCi/L					
Beryllium-7	U	-6.48	+/-28.7	50.7		pCi/L					
Bismuth-212	U	-46.7	+/-47.1	62.5		pCi/L					
Bismuth-214	U	3.23	+/-9.59	9.56		pCi/L					
Cerium-139	U	0.044	+/-2.40	4.17		pCi/L					
Cerium-141	U	-1.52	+/-6.31	10.5		pCi/L					
Cerium-144	U	-6.89	+/-16.0	26.5		pCi/L					
Cesium-134	U	1.09	+/-2.93	5.09		pCi/L					
Cesium-136	U	-8.08	+/-12.1	21.0		pCi/L					
Cesium-137	U	-0.169	+/-2.88	5.09	10.0	pCi/L					
Chromium-51	U	-33.7	+/-44.1	61.7		pCi/L					
Cobalt-56	U	0.414	+/-3.17	5.68		pCi/L					
Cobalt-57	U	-0.0367	+/-2.08	3.64		pCi/L					
Cobalt-58	U	0.0437	+/-3.82	5.83		pCi/L					
Cobalt-60	U	1.93	+/-2.98	5.79		pCi/L					
Europium-152	U	-2.18	+/-8.29	13.9		pCi/L					
Europium-154	U	-0.484	+/-8.27	13.1		pCi/L					
Europium-155	U	6.66	+/-6.32	13.4		pCi/L					
Iridium-192	U	2.07	+/-3.02	5.42		pCi/L					
Iron-59	U	-3.09	+/-6.57	11.6		pCi/L					
Lead-210	U	55.3	+/-196	224		pCi/L					
Lead-212	U	5.90	+/-6.96	7.68		pCi/L					
Lead-214	U	7.52	+/-7.44	11.0		pCi/L					
Manganese-54	U	-3.88	+/-2.74	4.24		pCi/L					
Mercury-203	U	3.31	+/-3.68	6.38		pCi/L					
Neodymium-147	U	-33.3	+/-77.6	135		pCi/L					
Neptunium-239	U	-7.49	+/-21.1	36.4		pCi/L					
Niobium-94	U	-0.423	+/-2.71	4.73		pCi/L					
Niobium-95	U	-0.589	+/-3.28	5.73		pCi/L					
Potassium-40	U	36.8	+/-49.0	48.9		pCi/L					
Promethium-144	U	1.77	+/-2.74	5.06		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43  
Sample ID: 352805025

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.661	+/-3.18	5.63	pCi/L
Radium-228	U	5.39	+/-17.6	21.1	pCi/L
Ruthenium-106	U	22.0	+/-44.5	42.7	pCi/L
Silver-110m	U	1.98	+/-2.71	5.05	pCi/L
Sodium-22	U	-0.204	+/-2.93	4.63	pCi/L
Thallium-208	U	0.498	+/-6.33	4.67	pCi/L
Thorium-230	U	562	+/-703	1150	pCi/L
Thorium-234	U	104	+/-149	125	pCi/L
Tin-113	U	0.0758	+/-3.48	6.27	pCi/L
Uranium-235	U	-8.89	+/-20.8	27.3	pCi/L
Uranium-238	U	104	+/-149	125	pCi/L
Yttrium-88	U	-0.134	+/-3.04	5.74	pCi/L
Zinc-65	U	2.16	+/-5.98	10.1	pCi/L
Zirconium-95	U	-3.94	+/-5.63	9.41	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.05	+/-1.85	3.39	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta		8.38	+/-2.92	3.46	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-12.5	+/-108	190	300	pCi/L	MYM1	08/10/14	1425	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	352805026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	08-JUL-14 10:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.91	+/-15.4	25.3		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	1.47	+/-4.42	7.09		pCi/L					
Antimony-124	U	-2.55	+/-9.75	17.6		pCi/L					
Antimony-125	U	-2.05	+/-7.25	12.9		pCi/L					
Barium-133	U	-0.639	+/-3.67	5.77		pCi/L					
Barium-140	U	7.11	+/-16.9	33.0		pCi/L					
Beryllium-7	U	-0.405	+/-34.4	56.3		pCi/L					
Bismuth-212	U	-0.172	+/-41.9	74.1		pCi/L					
Bismuth-214	U	0.235	+/-7.99	12.1		pCi/L					
Cerium-139	U	-2.0	+/-2.64	3.96		pCi/L					
Cerium-141	U	4.65	+/-6.62	9.64		pCi/L					
Cerium-144	U	18.4	+/-14.9	26.6		pCi/L					
Cesium-134	U	-4.69	+/-5.05	6.56		pCi/L					
Cesium-136	U	-6.83	+/-19.2	33.3		pCi/L					
Cesium-137	U	-1.3	+/-3.13	5.36	10.0	pCi/L					
Chromium-51	U	-33.8	+/-42.8	70.5		pCi/L					
Cobalt-56	U	-1.41	+/-4.02	7.11		pCi/L					
Cobalt-57	U	0.463	+/-1.87	3.20		pCi/L					
Cobalt-58	U	-1.44	+/-4.21	6.38		pCi/L					
Cobalt-60	U	1.47	+/-3.36	6.58		pCi/L					
Europium-152	U	2.32	+/-8.23	14.5		pCi/L					
Europium-154	U	6.11	+/-9.10	18.3		pCi/L					
Europium-155	U	-5.73	+/-6.62	10.8		pCi/L					
Iridium-192	U	1.62	+/-3.30	5.89		pCi/L					
Iron-59	U	-6.99	+/-8.99	14.9		pCi/L					
Lead-210	U	4.41	+/-74.7	67.2		pCi/L					
Lead-212	U	2.46	+/-8.14	8.96		pCi/L					
Lead-214	U	-1.87	+/-7.15	10.6		pCi/L					
Manganese-54	U	-0.569	+/-3.32	5.96		pCi/L					
Mercury-203	U	2.10	+/-3.74	6.72		pCi/L					
Neodymium-147	U	-14.8	+/-103	182		pCi/L					
Neptunium-239	U	-8.48	+/-18.7	31.0		pCi/L					
Niobium-94	U	0.234	+/-3.10	5.48		pCi/L					
Niobium-95	U	3.02	+/-3.86	7.51		pCi/L					
Potassium-40	U	33.6	+/-52.7	44.2		pCi/L					
Promethium-144	U	1.11	+/-3.29	5.93		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 352805026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.08	+/-3.69	6.76	pCi/L
Radium-228	U	2.91	+/-15.4	25.3	pCi/L
Ruthenium-106	U	-33	+/-31.8	51.7	pCi/L
Silver-110m	U	-1.2	+/-3.08	5.28	pCi/L
Sodium-22	U	2.17	+/-3.23	6.50	pCi/L
Thallium-208	U	0.656	+/-6.19	5.71	pCi/L
Thorium-230	U	-208	+/-418	675	pCi/L
Thorium-234	U	30.3	+/-79.8	70.7	pCi/L
Tin-113	U	-5.11	+/-3.68	6.08	pCi/L
Uranium-235	U	11.4	+/-16.3	26.4	pCi/L
Uranium-238	U	30.3	+/-79.8	70.7	pCi/L
Yttrium-88	U	1.41	+/-4.72	9.28	pCi/L
Zinc-65	U	0.463	+/-6.84	10.9	pCi/L
Zirconium-95	U	3.76	+/-6.68	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.18	+/-2.16	3.29	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta	U	0.586	+/-2.09	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	49.8	+/-109	187	300	pCi/L	MYM1	08/10/14	1442	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-14 09:08		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.929	+/-18.9	21.1		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	3.86	+/-8.20	14.6		pCi/L					
Antimony-124	U	-2.69	+/-7.24	12.7		pCi/L					
Antimony-125	U	-0.889	+/-6.85	11.8		pCi/L					
Barium-133	U	-1.81	+/-3.48	5.89		pCi/L					
Barium-140	U	-9.53	+/-12.9	21.5		pCi/L					
Beryllium-7	U	26.3	+/-30.7	55.4		pCi/L					
Bismuth-212	U	12.1	+/-38.4	69.9		pCi/L					
Bismuth-214	U	4.76	+/-9.71	12.0		pCi/L					
Cerium-139	U	0.647	+/-2.66	4.01		pCi/L					
Cerium-141	U	-4.68	+/-8.28	10.4		pCi/L					
Cerium-144	U	11.1	+/-16.5	28.5		pCi/L					
Cesium-134	U	1.43	+/-2.99	5.52		pCi/L					
Cesium-136	U	4.35	+/-12.5	23.7		pCi/L					
Cesium-137	U	0.103	+/-2.53	4.58	10.0	pCi/L					
Chromium-51	U	26.9	+/-38.6	69.7		pCi/L					
Cobalt-56	U	1.32	+/-3.36	6.13		pCi/L					
Cobalt-57	U	1.24	+/-2.05	3.55		pCi/L					
Cobalt-58	U	-0.473	+/-2.92	5.17		pCi/L					
Cobalt-60	U	-2.35	+/-3.00	5.05		pCi/L					
Europium-152	U	4.61	+/-9.03	14.2		pCi/L					
Europium-154	U	3.95	+/-7.86	13.5		pCi/L					
Europium-155	U	1.33	+/-7.48	12.9		pCi/L					
Iridium-192	U	-0.972	+/-2.98	5.14		pCi/L					
Iron-59	U	1.34	+/-6.89	12.9		pCi/L					
Lead-210	U	49.6	+/-275	249		pCi/L					
Lead-212	U	1.89	+/-8.52	8.29		pCi/L					
Lead-214	U	-3.56	+/-7.66	10.7		pCi/L					
Manganese-54	U	-0.582	+/-2.81	4.90		pCi/L					
Mercury-203	U	-0.949	+/-4.47	6.20		pCi/L					
Neodymium-147	U	18.2	+/-82.2	151		pCi/L					
Neptunium-239	U	-7.99	+/-23.4	34.7		pCi/L					
Niobium-94	U	3.22	+/-3.35	4.77		pCi/L					
Niobium-95	U	0.905	+/-3.16	5.77		pCi/L					
Potassium-40	U	-13.3	+/-46.3	72.4		pCi/L					
Promethium-144	U	-0.673	+/-3.27	4.95		pCi/L					

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.532	+/-3.36	5.75	pCi/L
Radium-228	U	0.929	+/-18.9	21.1	pCi/L
Ruthenium-106	U	4.61	+/-25.8	46.8	pCi/L
Silver-110m	U	0.802	+/-2.52	4.63	pCi/L
Sodium-22	U	-2.49	+/-5.66	4.78	pCi/L
Thallium-208	U	2.28	+/-3.86	4.60	pCi/L
Thorium-230	UI	0.00	+/-1220	1210	pCi/L
Thorium-234	U	-72.2	+/-115	161	pCi/L
Tin-113	U	-0.91	+/-3.71	6.34	pCi/L
Uranium-235	U	0.0697	+/-17.9	27.3	pCi/L
Uranium-238	U	-72.2	+/-115	161	pCi/L
Yttrium-88	U	-3.14	+/-2.76	4.40	pCi/L
Zinc-65	U	-4.3	+/-5.79	9.97	pCi/L
Zirconium-95	U	-0.514	+/-5.44	9.70	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		3.91	+/-2.46	3.01	5.00	pCi/L	JXH3	08/12/14	0846	1406421	2
Beta		58.8	+/-5.32	4.83	5.00	pCi/L					
Alpha	U	2.27	+/-3.15	3.89	5.00	pCi/L	JXH3	08/13/14	1018	1406421	3
Beta		51.5	+/-6.16	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	156	+/-122	201	300	pCi/L	MYM1	08/11/14	0813	1407037	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	352805027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	352805028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-JUL-14 10:45		
Receive Date:	16-JUL-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.12	+/-17.9	21.2		pCi/L		MJH1	08/04/14	1616 1405431	1
Americium-241	U	1.02	+/-16.3	28.2		pCi/L					
Antimony-124	U	-1.42	+/-7.08	13.2		pCi/L					
Antimony-125	U	-2.52	+/-6.96	11.7		pCi/L					
Barium-133	U	-4.8	+/-3.39	5.34		pCi/L					
Barium-140	U	-3.34	+/-9.19	16.8		pCi/L					
Beryllium-7	U	5.43	+/-27.5	50.4		pCi/L					
Bismuth-212	U	-22.5	+/-47.8	62.0		pCi/L					
Bismuth-214	U	4.29	+/-9.51	11.4		pCi/L					
Cerium-139	U	0.235	+/-2.73	4.31		pCi/L					
Cerium-141	U	1.70	+/-5.84	10.2		pCi/L					
Cerium-144	U	10.1	+/-17.1	28.2		pCi/L					
Cesium-134	U	-2.11	+/-2.90	4.82		pCi/L					
Cesium-136	U	-4.62	+/-10.7	18.9		pCi/L					
Cesium-137	U	-2.87	+/-4.08	6.10	10.0	pCi/L					
Chromium-51	U	-8.07	+/-41.5	62.0		pCi/L					
Cobalt-56	U	1.10	+/-3.16	5.76		pCi/L					
Cobalt-57	U	-0.676	+/-2.47	3.61		pCi/L					
Cobalt-58	U	0.129	+/-3.46	5.35		pCi/L					
Cobalt-60	U	1.35	+/-3.04	5.81		pCi/L					
Europium-152	U	2.05	+/-7.61	13.4		pCi/L					
Europium-154	U	5.64	+/-8.18	14.6		pCi/L					
Europium-155	U	10.8	+/-8.63	15.5		pCi/L					
Iridium-192	U	2.55	+/-3.00	5.46		pCi/L					
Iron-59	U	-3.86	+/-6.80	11.8		pCi/L					
Lead-210	U	443	+/-741	822		pCi/L					
Lead-212	U	2.28	+/-6.93	9.65		pCi/L					
Lead-214	U	0.287	+/-7.48	10.6		pCi/L					
Manganese-54	U	-1.39	+/-3.20	4.72		pCi/L					
Mercury-203	U	3.44	+/-4.54	4.76		pCi/L					
Neodymium-147	U	-51.9	+/-61.2	104		pCi/L					
Neptunium-239	U	2.55	+/-25.6	38.4		pCi/L					
Niobium-94	U	0.0815	+/-2.62	4.66		pCi/L					
Niobium-95	U	0.562	+/-4.03	5.88		pCi/L					
Potassium-40	UI	0.00	+/-66.9	43.6		pCi/L					
Promethium-144	U	0.0823	+/-2.74	4.88		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 20, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 352805028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0275	+/-3.21	5.82	pCi/L
Radium-228	U	3.12	+/-17.9	21.2	pCi/L
Ruthenium-106	U	-6.42	+/-25.5	44.9	pCi/L
Silver-110m	U	-4.73	+/-3.03	4.79	pCi/L
Sodium-22	U	1.96	+/-2.89	5.15	pCi/L
Thallium-208	U	0.718	+/-3.85	5.82	pCi/L
Thorium-230	U	-615	+/-1240	1880	pCi/L
Thorium-234	U	-48.7	+/-177	266	pCi/L
Tin-113	U	3.57	+/-3.72	6.80	pCi/L
Uranium-235	U	-1.36	+/-22.0	29.4	pCi/L
Uranium-238	U	-48.7	+/-177	266	pCi/L
Yttrium-88	U	2.17	+/-3.10	6.47	pCi/L
Zinc-65	U	1.27	+/-6.10	11.4	pCi/L
Zirconium-95	U	0.889	+/-5.09	9.28	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.204	+/-1.60	3.56	5.00	pCi/L	JXH3	08/12/14	0849	1406421	2
Beta		12.6	+/-3.85	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	85.9	+/-114	193	300	pCi/L	MYM1	08/10/14	1515	1407037	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: August 20, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 352805

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1411601										
QC1203148403	352805019	DUP									
Uranium-233/234		30.0		36.0	pCi/L	18.2		(0%-20%)	HAKB	08/15/14	09:54
	Uncertainty	+/-2.93		+/-3.40							
Uranium-235/236		1.28		1.23	pCi/L	3.73		(0% - 100%)			
	Uncertainty	+/-0.693		+/-0.726							
Uranium-238		9.27		8.93	pCi/L	3.76		(0%-20%)			
	Uncertainty	+/-1.63		+/-1.70							
QC1203148404	LCS										
Uranium-233/234				28.0	pCi/L					08/15/14	09:54
	Uncertainty			+/-3.16							
Uranium-235/236			U	0.490	pCi/L						
	Uncertainty			+/-0.560							
Uranium-238		27.2		29.1	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3.23							
QC1203148402	MB										
Uranium-233/234			U	-0.357	pCi/L					08/15/14	09:54
	Uncertainty			+/-0.234							
Uranium-235/236			U	-0.049	pCi/L						
	Uncertainty			+/-0.217							
Uranium-238			U	-0.119	pCi/L						
	Uncertainty			+/-0.192							
<b>Rad Gamma Spec</b>											
Batch	1405429										
QC1203132576	352805001	DUP									
Actinium-228		U	-1.29	U	20.3	pCi/L	N/A		N/A	MJH1	08/02/14 10:37
	Uncertainty		+/-20.9		+/-17.0						
Americium-241		U	0.613	U	-26.5	pCi/L	N/A		N/A		
	Uncertainty		+/-26.0		+/-26.2						
Antimony-124		U	7.50	U	-3.31	pCi/L	N/A		N/A		
	Uncertainty		+/-11.5		+/-8.48						
Antimony-125		U	3.72	U	3.38	pCi/L	N/A		N/A		
	Uncertainty		+/-13.5		+/-8.09						
Barium-133		U	1.41	U	-0.281	pCi/L	N/A		N/A		
	Uncertainty		+/-6.10		+/-4.38						
Barium-140		U	-17.8	U	-0.00897	pCi/L	N/A		N/A		
	Uncertainty		+/-16.1		+/-9.26						
Beryllium-7		U	-0.334	U	4.50	pCi/L	N/A		N/A		
	Uncertainty		+/-43.5		+/-29.4						
Bismuth-212		U	7.60	U	-11.8	pCi/L	N/A		N/A		
	Uncertainty		+/-64.0		+/-43.1						
Bismuth-214		U	-9.48	U	3.46	pCi/L	N/A		N/A		

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 352805

Page 2 of 18

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
	Uncertainty										
		+/-12.2		+/-12.7							
Cerium-139	U	1.22	U	-0.435	pCi/L	N/A		N/A	MJH1	08/02/14	10:37
	Uncertainty	+/-4.23		+/-3.00							
Cerium-141	U	-4.21	U	-1.31	pCi/L	N/A		N/A			
	Uncertainty	+/-9.06		+/-9.69							
Cerium-144	U	24.2	U	-9.24	pCi/L	N/A		N/A			
	Uncertainty	+/-30.2		+/-20.0							
Cesium-134	U	-1.86	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-5.95		+/-4.79							
Cesium-136	U	2.37	U	3.91	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-10.7							
Cesium-137	U	4.42	U	-0.678	pCi/L	N/A		N/A			
	Uncertainty	+/-5.86		+/-3.05							
Chromium-51	U	19.4	U	1.72	pCi/L	N/A		N/A			
	Uncertainty	+/-60.0		+/-39.4							
Cobalt-56	U	0.985	U	-0.501	pCi/L	N/A		N/A			
	Uncertainty	+/-5.27		+/-3.94							
Cobalt-57	U	-4.66	U	-0.407	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-2.73							
Cobalt-58	U	0.235	U	-2.83	pCi/L	N/A		N/A			
	Uncertainty	+/-5.29		+/-3.25							
Cobalt-60	U	-0.16	U	0.311	pCi/L	N/A		N/A			
	Uncertainty	+/-5.73		+/-3.04							
Europium-152	U	13.7	U	2.41	pCi/L	N/A		N/A			
	Uncertainty	+/-18.2		+/-10.4							
Europium-154	U	-7.72	U	-5.15	pCi/L	N/A		N/A			
	Uncertainty	+/-14.8		+/-8.48							
Europium-155	U	-3.63	U	-1.4	pCi/L	N/A		N/A			
	Uncertainty	+/-14.5		+/-10.9							
Iridium-192	U	7.43	U	-3.6	pCi/L	N/A		N/A			
	Uncertainty	+/-6.76		+/-3.38							
Iron-59	U	-10.3	U	-3.46	pCi/L	N/A		N/A			
	Uncertainty	+/-11.1		+/-7.44							
Lead-210	U	-288	U	-973	pCi/L	N/A		N/A			
	Uncertainty	+/-1000		+/-1380							
Lead-212	U	11.5	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-13.5		+/-9.26							
Lead-214	U	12.6	U	9.95	pCi/L	N/A		N/A			
	Uncertainty	+/-16.1		+/-11.1							
Manganese-54	U	-0.952	U	-0.551	pCi/L	N/A		N/A			
	Uncertainty	+/-4.28		+/-5.21							
Mercury-203	U	1.69	U	1.43	pCi/L	N/A		N/A			
	Uncertainty	+/-5.40		+/-3.98							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Neodymium-147	U	20.0	U	5.16	pCi/L	N/A		N/A			
	Uncertainty	+/-81.4		+/-61.4							
Neptunium-239	U	7.77	U	-6.02	pCi/L	N/A		N/A	MJH1	08/02/14	10:37
	Uncertainty	+/-36.3		+/-27.5							
Niobium-94	U	0.283	U	-2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-4.65		+/-2.78							
Niobium-95	UI	0.00	U	-3.03	pCi/L	N/A		N/A			
	Uncertainty	+/-5.18		+/-3.52							
Potassium-40	U	-35.3	U	2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-70.7		+/-51.9							
Promethium-144	U	-1.72	U	-0.854	pCi/L	N/A		N/A			
	Uncertainty	+/-6.08		+/-3.10							
Promethium-146	U	3.01	U	-2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-6.14		+/-3.79							
Radium-228	U	-1.29	U	20.3	pCi/L	N/A		N/A			
	Uncertainty	+/-20.9		+/-17.0							
Ruthenium-106	U	-21.4	U	14.1	pCi/L	N/A		N/A			
	Uncertainty	+/-43.2		+/-28.5							
Silver-110m	U	6.18	U	0.699	pCi/L	N/A		N/A			
	Uncertainty	+/-4.88		+/-2.88							
Sodium-22	U	-2.81	U	-2.52	pCi/L	N/A		N/A			
	Uncertainty	+/-5.22		+/-3.05							
Thallium-208	U	4.34	U	-1.94	pCi/L	N/A		N/A			
	Uncertainty	+/-8.29		+/-4.62							
Thorium-230	U	-1210	U	-810	pCi/L	N/A		N/A			
	Uncertainty	+/-1770		+/-1810							
Thorium-234	U	-315	U	-63.3	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-267							
Tin-113	U	-1.31	U	0.752	pCi/L	N/A		N/A			
	Uncertainty	+/-6.78		+/-4.70							
Uranium-235	U	-25.7	U	4.10	pCi/L	N/A		N/A			
	Uncertainty	+/-31.2		+/-26.2							
Uranium-238	U	-315	U	-63.3	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-267							
Yttrium-88	U	-0.238	U	-0.123	pCi/L	N/A		N/A			
	Uncertainty	+/-6.27		+/-3.90							
Zinc-65	U	-10.9	U	-3.3	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-6.82							
Zirconium-95	U	7.42	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-6.89							
QC1203132577	LCS										
Actinium-228			U	-710	pCi/L					08/04/14	11:39
	Uncertainty			+/-1040							
Americium-241	1.10E+05			1.21E+05	pCi/L		109	(75%-125%)			
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
				+/-3440							
Antimony-124			U	-80	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-217							
Antimony-125			U	140	pCi/L						
	Uncertainty			+/-581							
Barium-133			U	-12.2	pCi/L						
	Uncertainty			+/-237							
Barium-140			U	-33.7	pCi/L						
	Uncertainty			+/-212							
Beryllium-7			U	570	pCi/L						
	Uncertainty			+/-2260							
Bismuth-212			U	-1340	pCi/L						
	Uncertainty			+/-2780							
Bismuth-214			U	-153	pCi/L						
	Uncertainty			+/-371							
Cerium-139				848	pCi/L						
	Uncertainty			+/-204							
Cerium-141			U	-150	pCi/L						
	Uncertainty			+/-287							
Cerium-144			U	642	pCi/L						
	Uncertainty			+/-1170							
Cesium-134			U	217	pCi/L						
	Uncertainty			+/-249							
Cesium-136			U	-130	pCi/L						
	Uncertainty			+/-592							
Cesium-137	44900			46600	pCi/L		104	(75%-125%)			
	Uncertainty			+/-854							
Chromium-51			U	1400	pCi/L						
	Uncertainty			+/-1890							
Cobalt-56			U	-203	pCi/L						
	Uncertainty			+/-270							
Cobalt-57				4520	pCi/L						
	Uncertainty			+/-278							
Cobalt-58			U	222	pCi/L						
	Uncertainty			+/-282							
Cobalt-60	55700			56400	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1050							
Europium-152			U	314	pCi/L						
	Uncertainty			+/-556							
Europium-154			U	-66.3	pCi/L						
	Uncertainty			+/-371							
Europium-155			U	211	pCi/L						
	Uncertainty			+/-574							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Iridium-192			U	-97.6	pCi/L						
	Uncertainty			+/-188							
Iron-59			U	752	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-662							
Lead-210				1.59E+06	pCi/L						
	Uncertainty			+/-83500							
Lead-212			U	343	pCi/L						
	Uncertainty			+/-309							
Lead-214			U	118	pCi/L						
	Uncertainty			+/-411							
Manganese-54			U	-16.2	pCi/L						
	Uncertainty			+/-240							
Mercury-203			U	-244	pCi/L						
	Uncertainty			+/-228							
Neodymium-147			U	-851	pCi/L						
	Uncertainty			+/-2650							
Neptunium-239			U	626	pCi/L						
	Uncertainty			+/-1680							
Niobium-94			U	143	pCi/L						
	Uncertainty			+/-179							
Niobium-95			U	34.9	pCi/L						
	Uncertainty			+/-227							
Potassium-40			U	303	pCi/L						
	Uncertainty			+/-932							
Promethium-144			U	-110	pCi/L						
	Uncertainty			+/-180							
Promethium-146			U	384	pCi/L						
	Uncertainty			+/-320							
Radium-228			U	-710	pCi/L						
	Uncertainty			+/-1040							
Ruthenium-106			U	1630	pCi/L						
	Uncertainty			+/-1790							
Silver-110m				1020	pCi/L						
	Uncertainty			+/-255							
Sodium-22			U	-20.9	pCi/L						
	Uncertainty			+/-130							
Thallium-208			U	129	pCi/L						
	Uncertainty			+/-193							
Thorium-230				1.54E+05	pCi/L						
	Uncertainty			+/-72600							
Thorium-234			U	-24200	pCi/L						
	Uncertainty			+/-9900							
Tin-113				461	pCi/L						
	Uncertainty			+/-365							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Uranium-235			U	-153	pCi/L						
	Uncertainty			+/-986							
Uranium-238			U	-24200	pCi/L				MJH1	08/04/14	11:39
	Uncertainty			+/-9900							
Yttrium-88				818	pCi/L						
	Uncertainty			+/-167							
Zinc-65				14200	pCi/L						
	Uncertainty			+/-1160							
Zirconium-95			U	-30.9	pCi/L						
	Uncertainty			+/-411							
QC1203132575	MB										
Actinium-228			U	4.79	pCi/L					08/02/14	10:36
	Uncertainty			+/-18.0							
Americium-241			U	6.11	pCi/L						
	Uncertainty			+/-9.85							
Antimony-124			U	-3.99	pCi/L						
	Uncertainty			+/-5.73							
Antimony-125			U	1.87	pCi/L						
	Uncertainty			+/-6.88							
Barium-133			U	-2.85	pCi/L						
	Uncertainty			+/-3.17							
Barium-140			U	1.58	pCi/L						
	Uncertainty			+/-6.00							
Beryllium-7			U	-17.7	pCi/L						
	Uncertainty			+/-23.1							
Bismuth-212			U	48.9	pCi/L						
	Uncertainty			+/-29.2							
Bismuth-214			U	1.79	pCi/L						
	Uncertainty			+/-7.38							
Cerium-139			U	-0.014	pCi/L						
	Uncertainty			+/-2.12							
Cerium-141			U	-5.44	pCi/L						
	Uncertainty			+/-4.98							
Cerium-144			U	5.15	pCi/L						
	Uncertainty			+/-15.5							
Cesium-134			U	2.22	pCi/L						
	Uncertainty			+/-2.84							
Cesium-136			U	-5.91	pCi/L						
	Uncertainty			+/-6.01							
Cesium-137			U	1.27	pCi/L						
	Uncertainty			+/-3.60							
Chromium-51			U	-14.5	pCi/L						
	Uncertainty			+/-24.7							
Cobalt-56			U	-3.1	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405429										
Cobalt-57	Uncertainty		U	+/-3.00	pCi/L				MJH1	08/02/14	10:36
				1.39							
Cobalt-58	Uncertainty		U	+/-1.83	pCi/L						
				-1.29							
Cobalt-60	Uncertainty		U	+/-2.74	pCi/L						
				-1.18							
Europium-152	Uncertainty		U	+/-3.22	pCi/L						
				+/-7.26							
Europium-154	Uncertainty		U	2.19	pCi/L						
				+/-7.10							
Europium-155	Uncertainty		U	-0.0728	pCi/L						
				+/-7.82							
Iridium-192	Uncertainty		U	0.135	pCi/L						
				+/-2.59							
Iron-59	Uncertainty		U	4.09	pCi/L						
				+/-5.60							
Lead-210	Uncertainty		U	-252	pCi/L						
				+/-277							
Lead-212	Uncertainty		U	0.743	pCi/L						
				+/-6.19							
Lead-214	Uncertainty		U	-5.27	pCi/L						
				+/-7.82							
Manganese-54	Uncertainty		U	-1.66	pCi/L						
				+/-2.71							
Mercury-203	Uncertainty		U	-0.88	pCi/L						
				+/-2.64							
Neodymium-147	Uncertainty		U	-4.67	pCi/L						
				+/-30.9							
Neptunium-239	Uncertainty		U	3.83	pCi/L						
				+/-19.8							
Niobium-94	Uncertainty		U	-0.269	pCi/L						
				+/-2.71							
Niobium-95	Uncertainty		U	1.67	pCi/L						
				+/-2.63							
Potassium-40	Uncertainty		U	25.5	pCi/L						
				+/-39.7							
Promethium-144	Uncertainty		U	1.02	pCi/L						
				+/-3.12							
Promethium-146	Uncertainty		U	-0.156	pCi/L						
				+/-3.30							
Radium-228	Uncertainty		U	4.79	pCi/L						
				+/-18.0							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1405429										
Ruthenium-106			U	20.7	pCi/L						
	Uncertainty			+/-61.2							
Silver-110m			U	1.24	pCi/L				MJH1	08/02/14	10:36
	Uncertainty			+/-2.62							
Sodium-22			U	0.691	pCi/L						
	Uncertainty			+/-2.49							
Thallium-208			U	3.02	pCi/L						
	Uncertainty			+/-3.55							
Thorium-230			U	-117	pCi/L						
	Uncertainty			+/-699							
Thorium-234			U	-75.6	pCi/L						
	Uncertainty			+/-127							
Tin-113			U	-1.12	pCi/L						
	Uncertainty			+/-3.58							
Uranium-235			U	-11.6	pCi/L						
	Uncertainty			+/-18.2							
Uranium-238			U	-75.6	pCi/L						
	Uncertainty			+/-127							
Yttrium-88			U	2.49	pCi/L						
	Uncertainty			+/-2.82							
Zinc-65			U	-2.69	pCi/L						
	Uncertainty			+/-5.83							
Zirconium-95			U	-1.54	pCi/L						
	Uncertainty			+/-4.58							
Batch	1405431										
QC1203132579 352805021 DUP											
Actinium-228	U	2.89	U	-16.1	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-17.4		+/-17.0							
Americium-241	U	-16.8	U	-8.63	pCi/L	N/A		N/A			
	Uncertainty	+/-19.9		+/-24.8							
Antimony-124	U	-1.5	U	2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-8.62		+/-8.05							
Antimony-125	U	-5.4	U	-2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-8.49		+/-7.46							
Barium-133	U	0.268	U	-0.301	pCi/L	N/A		N/A			
	Uncertainty	+/-3.79		+/-3.94							
Barium-140	U	4.10	U	2.34	pCi/L	N/A		N/A			
	Uncertainty	+/-15.3		+/-15.1							
Beryllium-7	U	16.1	U	-2.0	pCi/L	N/A		N/A			
	Uncertainty	+/-29.8		+/-31.6							
Bismuth-212	U	3.09	U	-22.1	pCi/L	N/A		N/A			
	Uncertainty	+/-47.8		+/-46.9							
Bismuth-214	U	1.11	U	-4.16	pCi/L	N/A		N/A			
	Uncertainty	+/-9.72		+/-8.60							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Cerium-139	U	-0.802	U	-0.954	pCi/L	N/A		N/A			
	Uncertainty	+/-2.75		+/-2.99							
Cerium-141	U	-20.8	U	-3.76	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-8.47		+/-9.63							
Cerium-144	U	-10.6	U	13.4	pCi/L	N/A		N/A			
	Uncertainty	+/-19.0		+/-18.5							
Cesium-134	U	1.13	U	-3.06	pCi/L	N/A		N/A			
	Uncertainty	+/-2.83		+/-4.86							
Cesium-136	U	-2.49	U	2.39	pCi/L	N/A		N/A			
	Uncertainty	+/-11.8		+/-17.3							
Cesium-137	U	-1.35	U	3.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.39		+/-2.85							
Chromium-51	U	39.2	U	33.5	pCi/L	N/A		N/A			
	Uncertainty	+/-50.0		+/-42.4							
Cobalt-56	U	-1.49	U	1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-3.32		+/-3.54							
Cobalt-57	U	0.786	U	1.61	pCi/L	N/A		N/A			
	Uncertainty	+/-2.16		+/-2.45							
Cobalt-58	U	0.781	U	-0.57	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-3.52							
Cobalt-60	U	1.90	U	-1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-3.07		+/-2.87							
Europium-152	U	1.37	U	2.65	pCi/L	N/A		N/A			
	Uncertainty	+/-8.13		+/-7.79							
Europium-154	U	-4.08	U	3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-8.68		+/-7.51							
Europium-155	U	5.70	U	6.87	pCi/L	N/A		N/A			
	Uncertainty	+/-10.1		+/-9.65							
Iridium-192	U	1.31	U	-0.0739	pCi/L	N/A		N/A			
	Uncertainty	+/-3.61		+/-3.31							
Iron-59	U	-2.89	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-8.58		+/-7.69							
Lead-210	U	-328	U	263	pCi/L	N/A		N/A			
	Uncertainty	+/-831		+/-1010							
Lead-212	U	0.0286	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-8.00		+/-7.59							
Lead-214	U	2.22	U	5.56	pCi/L	N/A		N/A			
	Uncertainty	+/-9.21		+/-10.9							
Manganese-54	U	-2.37	U	3.99	pCi/L	N/A		N/A			
	Uncertainty	+/-2.70		+/-2.15							
Mercury-203	U	-0.232	U	3.87	pCi/L	N/A		N/A			
	Uncertainty	+/-3.68		+/-2.98							
Neodymium-147	U	27.8	U	-47.9	pCi/L	N/A		N/A			
	Uncertainty	+/-103		+/-93.9							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Neptunium-239	U	4.65	U	-3.34	pCi/L	N/A		N/A			
	Uncertainty	+/-22.4		+/-25.2							
Niobium-94	U	1.24	U	1.21	pCi/L	N/A		N/A	MJH1	08/04/14	16:17
	Uncertainty	+/-3.05		+/-2.49							
Niobium-95	U	-1.38	U	0.385	pCi/L	N/A		N/A			
	Uncertainty	+/-4.54		+/-4.08							
Potassium-40	U	17.5	U	-20.4	pCi/L	N/A		N/A			
	Uncertainty	+/-58.4		+/-42.2							
Promethium-144	U	0.190	U	-0.198	pCi/L	N/A		N/A			
	Uncertainty	+/-3.28		+/-3.08							
Promethium-146	U	-0.0029	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-4.76							
Radium-228	U	2.89	U	-16.1	pCi/L	N/A		N/A			
	Uncertainty	+/-17.4		+/-17.0							
Ruthenium-106	U	-20.5	U	-11.5	pCi/L	N/A		N/A			
	Uncertainty	+/-27.7		+/-24.9							
Silver-110m	U	-0.0157	U	-1.94	pCi/L	N/A		N/A			
	Uncertainty	+/-2.94		+/-2.80							
Sodium-22	U	-1.45	U	1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-3.08		+/-2.66							
Thallium-208	U	4.27	U	1.62	pCi/L	N/A		N/A			
	Uncertainty	+/-4.14		+/-4.59							
Thorium-230	U	747	U	582	pCi/L	N/A		N/A			
	Uncertainty	+/-1360		+/-1670							
Thorium-234	U	76.9	U	-75.5	pCi/L	N/A		N/A			
	Uncertainty	+/-235		+/-249							
Tin-113	U	2.22	U	1.68	pCi/L	N/A		N/A			
	Uncertainty	+/-3.95		+/-4.14							
Uranium-235	U	-28.8	U	-0.614	pCi/L	N/A		N/A			
	Uncertainty	+/-22.0		+/-25.6							
Uranium-238	U	76.9	U	-75.5	pCi/L	N/A		N/A			
	Uncertainty	+/-235		+/-249							
Yttrium-88	U	3.09	U	-1.1	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-4.20							
Zinc-65	U	-0.839	U	-0.425	pCi/L	N/A		N/A			
	Uncertainty	+/-6.25		+/-5.72							
Zirconium-95	U	-0.663	U	-1.84	pCi/L	N/A		N/A			
	Uncertainty	+/-6.46		+/-5.85							
QC1203132580	LCS										
Actinium-228			U	199	pCi/L					08/05/14	09:06
	Uncertainty			+/-1130							
Americium-241	1.10E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3510							
Antimony-124			U	21.7	pCi/L						
	Uncertainty										

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Antimony-125			U	+/-218 343	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-600							
Barium-133			U	84.4	pCi/L						
	Uncertainty			+/-240							
Barium-140			U	-33	pCi/L						
	Uncertainty			+/-193							
Beryllium-7			U	-1340	pCi/L						
	Uncertainty			+/-2410							
Bismuth-212			U	507	pCi/L						
	Uncertainty			+/-3000							
Bismuth-214			U	-11.7	pCi/L						
	Uncertainty			+/-390							
Cerium-139				1030	pCi/L						
	Uncertainty			+/-278							
Cerium-141			U	200	pCi/L						
	Uncertainty			+/-281							
Cerium-144			U	390	pCi/L						
	Uncertainty			+/-1120							
Cesium-134			U	-93.8	pCi/L						
	Uncertainty			+/-284							
Cesium-136			U	-82.3	pCi/L						
	Uncertainty			+/-809							
Cesium-137	44900			45600	pCi/L		101	(75%-125%)			
	Uncertainty			+/-908							
Chromium-51			U	-988	pCi/L						
	Uncertainty			+/-1960							
Cobalt-56			U	-25.3	pCi/L						
	Uncertainty			+/-293							
Cobalt-57				4320	pCi/L						
	Uncertainty			+/-257							
Cobalt-58			U	35.0	pCi/L						
	Uncertainty			+/-272							
Cobalt-60	55700			56400	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1170							
Europium-152			U	-463	pCi/L						
	Uncertainty			+/-557							
Europium-154			U	61.5	pCi/L						
	Uncertainty			+/-424							
Europium-155			U	522	pCi/L						
	Uncertainty			+/-541							
Iridium-192			U	101	pCi/L						
	Uncertainty			+/-199							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Iron-59			U	127	pCi/L						
	Uncertainty			+/-650							
Lead-210				1.32E+06	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-64700							
Lead-212			U	83.9	pCi/L						
	Uncertainty			+/-303							
Lead-214			U	45.3	pCi/L						
	Uncertainty			+/-410							
Manganese-54			U	113	pCi/L						
	Uncertainty			+/-263							
Mercury-203			U	-59.2	pCi/L						
	Uncertainty			+/-227							
Neodymium-147			U	-629	pCi/L						
	Uncertainty			+/-2730							
Neptunium-239			U	-229	pCi/L						
	Uncertainty			+/-1470							
Niobium-94			U	9.92	pCi/L						
	Uncertainty			+/-195							
Niobium-95			U	-23.6	pCi/L						
	Uncertainty			+/-240							
Potassium-40			U	351	pCi/L						
	Uncertainty			+/-991							
Promethium-144			U	107	pCi/L						
	Uncertainty			+/-228							
Promethium-146			U	-43.5	pCi/L						
	Uncertainty			+/-278							
Radium-228			U	199	pCi/L						
	Uncertainty			+/-1130							
Ruthenium-106			U	458	pCi/L						
	Uncertainty			+/-1850							
Silver-110m				615	pCi/L						
	Uncertainty			+/-256							
Sodium-22			U	21.7	pCi/L						
	Uncertainty			+/-150							
Thallium-208			U	16.1	pCi/L						
	Uncertainty			+/-207							
Thorium-230			U	83200	pCi/L						
	Uncertainty			+/-75300							
Thorium-234			U	-13600	pCi/L						
	Uncertainty			+/-9950							
Tin-113				788	pCi/L						
	Uncertainty			+/-277							
Uranium-235			U	416	pCi/L						
	Uncertainty			+/-944							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Uranium-238			U	-13600	pCi/L						
	Uncertainty			+/-9950							
Yttrium-88				652	pCi/L				MJH1	08/05/14	09:06
	Uncertainty			+/-194							
Zinc-65				14800	pCi/L						
	Uncertainty			+/-1100							
Zirconium-95			U	88.1	pCi/L						
	Uncertainty			+/-441							
QC1203132578	MB										
Actinium-228			U	9.17	pCi/L					08/04/14	16:17
	Uncertainty			+/-19.7							
Americium-241			U	-41.3	pCi/L						
	Uncertainty			+/-6.44							
Antimony-124			U	0.724	pCi/L						
	Uncertainty			+/-10.2							
Antimony-125			U	9.92	pCi/L						
	Uncertainty			+/-9.75							
Barium-133			U	-0.287	pCi/L						
	Uncertainty			+/-4.43							
Barium-140			U	-2.81	pCi/L						
	Uncertainty			+/-10.2							
Beryllium-7			U	32.4	pCi/L						
	Uncertainty			+/-37.3							
Bismuth-212			U	16.2	pCi/L						
	Uncertainty			+/-73.3							
Bismuth-214			U	5.10	pCi/L						
	Uncertainty			+/-11.6							
Cerium-139			U	-1.04	pCi/L						
	Uncertainty			+/-3.01							
Cerium-141			UI	0.00	pCi/L						
	Uncertainty			+/-9.47							
Cerium-144			U	11.0	pCi/L						
	Uncertainty			+/-17.0							
Cesium-134			U	0.127	pCi/L						
	Uncertainty			+/-4.70							
Cesium-136			U	-2.02	pCi/L						
	Uncertainty			+/-9.16							
Cesium-137			U	0.937	pCi/L						
	Uncertainty			+/-4.15							
Chromium-51			U	-25.4	pCi/L						
	Uncertainty			+/-36.7							
Cobalt-56			U	-0.18	pCi/L						
	Uncertainty			+/-5.02							
Cobalt-57			U	0.244	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1405431										
Cobalt-58				+/-2.11							
			U	-1.37	pCi/L				MJH1	08/04/14	16:17
Cobalt-60	Uncertainty			+/-5.92							
			U	-0.398	pCi/L						
Europium-152	Uncertainty			+/-3.87							
			U	-0.681	pCi/L						
Europium-154	Uncertainty			+/-10.2							
			U	-1.73	pCi/L						
Europium-155	Uncertainty			+/-12.5							
			U	2.32	pCi/L						
Iridium-192	Uncertainty			+/-8.24							
			U	-1.87	pCi/L						
Iron-59	Uncertainty			+/-3.52							
			U	-3.12	pCi/L						
Lead-210	Uncertainty			+/-8.98							
			U	-63.8	pCi/L						
Lead-212	Uncertainty			+/-92.7							
			U	-1.01	pCi/L						
Lead-214	Uncertainty			+/-9.79							
			U	-0.859	pCi/L						
Manganese-54	Uncertainty			+/-7.67							
			U	-1.31	pCi/L						
Mercury-203	Uncertainty			+/-4.03							
			U	2.57	pCi/L						
Neodymium-147	Uncertainty			+/-3.83							
			U	-1.54	pCi/L						
Neptunium-239	Uncertainty			+/-51.2							
			U	-6.22	pCi/L						
Niobium-94	Uncertainty			+/-24.3							
			U	-2.9	pCi/L						
Niobium-95	Uncertainty			+/-4.35							
			U	2.67	pCi/L						
Potassium-40	Uncertainty			+/-4.60							
			U	17.8	pCi/L						
Promethium-144	Uncertainty			+/-60.9							
			U	1.62	pCi/L						
Promethium-146	Uncertainty			+/-5.37							
			U	-2.57	pCi/L						
Radium-228	Uncertainty			+/-4.56							
			U	9.17	pCi/L						
Ruthenium-106	Uncertainty			+/-19.7							
			U	-28.8	pCi/L						
	Uncertainty			+/-51.0							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1405431										
Silver-110m			U	1.05	pCi/L						
	Uncertainty			+/-3.88							
Sodium-22			U	-0.775	pCi/L				MJH1	08/04/14	16:17
	Uncertainty			+/-4.45							
Thallium-208			U	-1.86	pCi/L						
	Uncertainty			+/-5.67							
Thorium-230			U	-3100	pCi/L						
	Uncertainty			+/-589							
Thorium-234			U	-31.2	pCi/L						
	Uncertainty			+/-84.5							
Tin-113			U	1.54	pCi/L						
	Uncertainty			+/-4.49							
Uranium-235			UI	0.00	pCi/L						
	Uncertainty			+/-32.4							
Uranium-238			U	-31.2	pCi/L						
	Uncertainty			+/-84.5							
Yttrium-88			U	-0.073	pCi/L						
	Uncertainty			+/-3.69							
Zinc-65			U	0.455	pCi/L						
	Uncertainty			+/-8.14							
Zirconium-95			U	-8.04	pCi/L						
	Uncertainty			+/-7.78							
<b>Rad Gas Flow</b>											
Batch	1406420										
QC1203135088	352805003	DUP									
Alpha			7.58	6.22	pCi/L	19.7		(0% - 100%)	JXH3	08/11/14	14:44
	Uncertainty		+/-4.70	+/-3.69							
Beta			147	146	pCi/L	0.661		(0%-20%)			
	Uncertainty		+/-6.68	+/-7.84							
QC1203135091	LCS										
Alpha			123	134	pCi/L		108	(75%-125%)		08/12/14	09:41
	Uncertainty			+/-12.3							
Beta			451	518	pCi/L		115	(75%-125%)			
	Uncertainty			+/-18.3							
QC1203135087	MB										
Alpha			U	0.616	pCi/L					08/12/14	09:41
	Uncertainty			+/-1.65							
Beta			U	0.436	pCi/L						
	Uncertainty			+/-1.85							
QC1203135089	352805003	MS									
Alpha			494	577	pCi/L		115	(75%-125%)		08/11/14	14:45
	Uncertainty		+/-4.70	+/-65.7							
Beta			1800	2100	pCi/L		108	(75%-125%)			
	Uncertainty		+/-6.68	+/-80.8							
QC1203135090	352805003	MSD									



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1406420										
Alpha	494	7.58		556	pCi/L	3.65	111	(0%-20%)		08/11/14	14:44
	Uncertainty	+/-4.70		+/-62.7							
Beta	1800	147		2350	pCi/L	11.5	122	(0%-20%)	JXH3		
	Uncertainty	+/-6.68		+/-80.6							
Batch	1406421										
QC1203135097	352805023	DUP									
Alpha		7.17		5.89	pCi/L	19.6		(0% - 100%)	JXH3	08/12/14	08:49
	Uncertainty	+/-4.11		+/-3.94							
Beta		17.4		17.9	pCi/L	3.13		(0% - 100%)			
	Uncertainty	+/-3.93		+/-3.98							
QC1203135100	LCS										
Alpha	123			125	pCi/L		101	(75%-125%)		08/12/14	08:49
	Uncertainty			+/-12.2							
Beta	451			488	pCi/L		108	(75%-125%)			
	Uncertainty			+/-17.9							
QC1203135096	MB										
Alpha			U	-0.441	pCi/L					08/12/14	08:46
	Uncertainty			+/-1.22							
Beta			U	0.518	pCi/L						
	Uncertainty			+/-1.93							
QC1203135098	352805023	MS									
Alpha	494	7.17		564	pCi/L		113	(75%-125%)		08/12/14	12:51
	Uncertainty	+/-4.11		+/-56.6							
Beta	1800	17.4		2010	pCi/L		110	(75%-125%)			
	Uncertainty	+/-3.93		+/-73.2							
QC1203135099	352805023	MSD									
Alpha	494	7.17		562	pCi/L	0.430	112	(0%-20%)		08/12/14	12:51
	Uncertainty	+/-4.11		+/-54.8							
Beta	1800	17.4		2180	pCi/L	8.28	120	(0%-20%)			
	Uncertainty	+/-3.93		+/-75.1							
<b>Rad Liquid Scintillation</b>											
Batch	1407033										
QC1203136544	352805001	DUP									
Technetium-99	U	78.0	U	64.4	pCi/L	N/A			N/AMYM1	08/10/14	12:58
	Uncertainty	+/-92.4		+/-88.9							
QC1203136545	LCS										
Technetium-99	4340			3670	pCi/L		84.4	(75%-125%)		08/10/14	12:26
	Uncertainty			+/-205							
QC1203136543	MB										
Technetium-99			U	23.0	pCi/L					08/10/14	12:42
	Uncertainty			+/-85.9							
Batch	1407037										
QC1203136547	352805015	DUP									
Technetium-99	U	78.2	U	48.4	pCi/L	N/A			N/AMYM1	08/10/14	15:49
	Uncertainty	+/-115		+/-116							
QC1203136548	LCS										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1407037										
Technetium-99	4340			3960	pCi/L		91.2	(75%-125%)		08/10/14	16:06
	Uncertainty			+/-233							
QC1203136546	MB										
Technetium-99			U	82.7	pCi/L				MYM1	08/10/14	15:32
	Uncertainty			+/-116							

### 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 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, 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

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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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 20 August 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-14
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



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Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

SC Dept. of Health & Environmental Control  
Bureau of Water  
Attn: Bruce Crawford  
2600 Bull Street  
Columbia, South Carolina 29201

Direct tel: 803-647-3171  
Direct fax: 803-695-3964  
e-mail: logsdocj@westinghouse.com

Your ref: **Site ID # 00456**  
Our ref: LTR-RAC-15-67

cc:  
SC Dept. of Health & Environmental Control  
Bureau of Land and Waste Management  
Attn: Addie Walker  
2600 Bull Street  
Columbia, South Carolina 29201

Subject: NPDES Permit #SC0001848  
Ground Water Sampling, October 2014 through July 2015,  
Annual Report

Date: December 29, 2015

Dear Sir or Madame:

Enclosed are results from the groundwater sampling survey completed during January 2015 and July 2015, as requested by the Bureau of Water via NPDES permit #SC0001848. In this report, we are sharing October 2014 and April 2015 results as well as the required Winter and Summer 2015 results. Westinghouse is not required to sample groundwater quarterly, but we do so in order to have the benefit of more data points.

NPDES required wells W-26, W-41, W-48, and RW-2 were sampled on October 6, 2014, January 12, 2015, April 9, 2015, and on July 10, 2015, for volatile and semi-volatile organic compounds by Shealy Environmental Services, by purging three casing volumes using a Teflon bailer, then taking four readings to ensure parameter stabilization prior to sampling using a Grundfos pump. VOC results with the associated field data sheets are attached. The table below represents the only detected results.

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Well	Tetrachloroethene ug/L				Trichloroethene ug/L			
	Oct-14	Jan-15	Apr-15	Jul-15	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	100	110	140	120	5.4	6.3	12	8.9
W41	190	190	130	140	29	37	21	21
W48	120	140	170	170	0	4.0	5.5	7.7

Well	cis-1,2-Dichloroethene ug/L			
	Oct-14	Jan-15	Apr-15	Jul-15
W26	0	1.1	0	1.0
W41	0	1.2	0	0
W48	5.5	5.4	7.4	6.1

The Westinghouse technician sampled the remaining NPDES required wells, during October 2014, January, April, and July 2015, by purging three casing volumes using a Teflon bailer, then sampling by also using the dedicated bailer.

Analyses for ammonia, fluoride, pH and conductivity are completed by the Westinghouse chemical laboratory, while the Nitrate parameter is analyzed by Shealy Environmental Services. Radiological results for Tritium are analyzed by GEL. See the tables below for results.



Depth to Water pre-baling (feet)				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	18.4	18.4	18.3	18.1
W7	12.3	11.7	11.3	11.7
W10	16.7	16.6	15.7	16.2
W13R	13.1	12.7	11.6	12.1
W15	12.9	12.4	11.9	12.6
W16	4.1	4.1	3.4	3.9
W18	12.4	11.9	11.5	11.7
W22	11.8	10.8	10.3	10.7
W24	13.3	13.3	9.1	11.4
W26	26.2	26.2	26.3	25.7
W29	12.3	12.1	11.4	11.5
W30	12.7	12.5	11.8	11.8
W32	19.7	19.2	18.7	19.1
W33	16.1	16.0	15.5	15.7
W39	16.6	16.3	15.7	16.1
W41	15.9	15.8	15.6	15.5
W43	16.2	14.6	14.3	15.4
W44	19.2	19.1	18.7	18.9
W47	27.1	26.9	26.1	26.8
W48	27.1	27.1	26.2	26.8

Tritium pCi/L				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	0.00	21.2	57.8	0.00
W7	176	115	49.5	0.00
W10	2.23	50.6	115	0.00
W13R	113.7	336	164	0.00
W15	272	81.7	0.00	0.00
W16	0.00	337	96.2	0.00
W18	159	257	0.00	0.00
W22	0.00	175	0.00	0.00
W24	226	164	0.00	0.00
W26	34.3	4.07	18.6	0.00
W29	0.00	0.00	68.9	0.00
W30	0.00	21.6	0.00	0.00
W32	0.00	0.00	0.00	0.00
W33	0.00	109	0.00	38.6
W39	0.00	20.2	99.8	0.00
W41	0.00	0.00	0.00	0.00
W43	0.00	0.00	0.00	0.00
W44	0.00	0.00	29.9	0.00
W47	0.00	40.5	0.00	135
W48	32.1	0.00	0.00	96.5

Conductivity umho/cm				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	345	318	256	264
W7	1927	2400	2730	2970
W10	912	822	825	968
W13R	814	823	845	837
W15	432	421	432	437
W16	336	319	325	301
W18	5380	5520	5880	5930
W22	2720	907	992	1333
W24	61.3	61.0	59.2	58.5
W26	195.7	195.7	176.2	200.0
W29	837	880	821	844
W30	763	928	685	862
W32	1465	1504	1606	1815
W33	165.9	154.4	146.3	144.8
W39	1188	1129	951	779
W41	592	530	530	552
W43	109.1	109.1	124.4	114.2
W44	101.3	109.7	101.1	96.2
W47	535	537	522	586
W48	128.6	111.7	111.7	119.6

pH				
Well	Oct-14	Jan-15	Apr-15	Jul-15
WRW-2	4.43	4.56	4.60	4.69
W7	7.16	6.99	6.84	7.09
W10	5.60	5.24	5.55	5.92
W13R	6.51	6.52	6.45	6.59
W15	6.37	6.34	6.33	6.57
W16	6.22	6.22	6.23	6.25
W18	7.58	7.32	7.09	7.23
W22	5.26	4.90	4.61	5.49
W24	5.48	5.61	5.56	5.72
W26	5.76	6.10	5.69	6.00
W29	7.02	7.14	7.06	7.32
W30	6.66	6.53	6.66	6.73
W32	7.00	7.08	6.70	7.04
W33	5.62	5.66	5.66	5.85
W39	5.35	5.41	5.44	5.48
W41	5.61	5.99	5.90	5.95
W43	5.41	5.58	5.44	5.60
W44	5.31	5.35	5.40	5.65
W47	6.22	6.10	6.05	6.10
W48	5.66	5.98	5.77	5.87





Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
WRW-2	October	<0.500	<1.00	33	4.050	15.500
WRW-2	January	<0.500	<1.00	30.00	1.150	11.500
WRW-2	April	<0.500	<1.00	19.00	0.000	6.310
WRW-2	July	<0.500	<1.00	21	0.000	6.580
W7	October	7.50	57.0	200.00	5.890	116.000
W7	January	7.70	54.40	240.00	6.840	140.000
W7	April	6.6	56.1	300.00	4.020	109.000
W7	July	7.3	57.1	320.00	17.500	119.000
W10	October	3.31	5.03	86.00	4.620	83.400
W10	January	3.65	2.40	75.00	4.170	91.300
W10	April	2.7	4.4	66.00	1.920	92.700
W10	July	2.96	8.59	85.00	7.680	230.000
W13	October	10.00	47.45	30.50	4.930	84.900
W13	January	10.90	44.00	30.00	4.640	116.000
W13	April	10.70	47.80	33.00	0.805	146.000
W13	July	10.70	49.10	30.00	1.740	63.900
W15	October	2.17	13.1	24.00	8.970	242.000
W15	January	2.22	10.10	12.00	5.340	207.000
W15	April	2.16	6.35	26.00	3.050	171.000
W15	July	2.4	12.6	24.00	4.120	209.000
W16	October	8.6	17.3	2.90	0.000	17.600
W16	January	7.50	12.60	2.70	3.990	19.600
W16	April	7.2	10.2	2.70	1.160	14.100
W16	July	9.55	16.2	2.60	3.590	15.700
W18	October	7.40	141.0	680.00	10.200	167.000
W18	January	6.55	107.00	670.00	21.200	214.000
W18	April	6.2	99.6	720.00	11.700	179.000
W18	July	6.4	126.0	740.00	16.600	188.000



Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
W22	October	9.80	72.9	240.00	10.500	82.300
W22	January	5.50	26.10	64.00	7.250	48.100
W22	April	6.25	21.9	150.00	2.100	37.400
W22	July	6.6	63.1	170.00	5.750	42.500
W24	October	<0.500	<1.00	0.06	0.000	2.490
W24	January	<0.500	<1.00	0.06	1.080	2.530
W24	April	<0.500	<1.00	0.05	0.763	13.000
W24	July	<0.500	<1.00	0.02	0.712	1.970
W26	October	1.77	<1.00	3.30	0.000	9.210
W26	January	1.83	<1.00	2.90	0.000	11.600
W26	April	1.6	<1.00	2.90	0.569	0.000
W26	July	1.82	<1.00	2.70	1.120	12.500
W29	October	6.05	15.3	72.00	1.540	10.800
W29	January	5.75	16.00	66.00	4.920	11.000
W29	April	6.3	17.9	64.00	5.360	10.200
W29	July	6.95	25.2	58.00	6.090	8.790
W30	October	11.5	<1.00	46.00	44.600	46.100
W30	January	11.30	1.32	78.00	24.300	34.400
W30	April	10.8	<1.00	42.00	24.300	36.000
W30	July	9.65	1.29	69.00	12.200	21.700
W32	October	5.10	58.6	160.00	3.510	232.000
W32	January	4.55	54.40	150.00	6.630	251.000
W32	April	5.0	48.0	160.00	3.520	211.000
W32	July	4.66	75.1	190.00	8.080	201.000
W33	October	<0.500	<1.00	10.00	0.000	5.260
W33	January	<0.500	<1.00	7.90	1.860	2.830
W33	April	<0.500	<1.00	6.90	0.000	2.000
W33	July	<0.500	<1.00	7.50	1.990	5.260





Well	Month	Fluoride mg/l	NH3(N) mg/l	NO3 mg/l	Gross Alpha pCi/L	Gross Beta pCi/L
W39	October	<0.500	<1.00	130.00	4.780	25.500
W39	January	<0.500	<1.00	120.00	3.670	28.100
W39	April	<0.500	<1.00	94.00	4.340	22.600
W39	July	<0.500	<1.00	6.80	3.230	13.300
W41	October	<0.500	<1.00	62.00	1.310	17.300
W41	January	<0.500	<1.00	56.00	4.020	22.000
W41	April	<0.500	<1.00	51.00	0.000	17.600
W41	July	<0.500	<1.00	54.00	6.770	22.200
W43	October	<0.500	<1.00	5.40	0.000	3.080
W43	January	<0.500	<1.00	6.40	0.000	4.360
W43	April	<0.500	<1.00	7.00	0.000	3.670
W43	July	<0.500	<1.00	74.00	0.462	7.500
W44	October	<0.500	<1.00	3.80	0.000	3.110
W44	January	<0.500	<1.00	4.50	0.659	2.470
W44	April	<0.500	<1.00	3.70	4.440	4.150
W44	July	<0.500	<1.00	2.50	1.400	0.000
W47	October	5.25	18.6	27.00	3.950	74.700
W47	January	4.92	18.30	34.00	0.672	90.200
W47	April	5.2	15.0	31.00	2.070	74.600
W47	July	5.35	18.9	36.00	2.460	80.800
W48	October	<0.500	<1.00	4.50	0.000	8.450
W48	January	<0.500	<1.00	2.30	1.640	7.150
W48	April	<0.500	<1.00	3.20	2.440	11.400
W48	July	<0.500	<1.00	3.40	1.910	6.430

Gamma results (fission and activation products) are attached, as reported by General Engineering Laboratories (GEL).



Page 7 of 7  
Westinghouse Electric Company LLC  
Nuclear Fuel  
Columbia Fuel Site  
5801 Bluff Road  
Hopkins, South Carolina 29061  
USA

Please contact me at (803) 647-3171 if you have any questions regarding these results.

Sincerely,

WESTINGHOUSE ELECTRIC COMPANY LLC

A handwritten signature in black ink, appearing to read 'C. Logsdon'.

Cynthia J. Logsdon  
Principal Environmental Engineer  
Environment, Health & Safety  
Columbia Fuel Fabrication Facility, Westinghouse Electric Company

*Enclosures on disk/*

- a) Site location map, topographic*
- b) Monitoring well location map, 647F01CV01.01*
- c) Shealy Environmental Services lab reports, VOC/SVOC results and bench sheets*
- d) Shealy Environmental Services lab reports, Nitrate results*
- e) GEL lab reports, Gamma Spectroscopy (Fission & Activation Products) results*
- f) GEL lab reports, Tritium results*
- g) Westinghouse Electric Company lab reports, pH, Ammonia, Fluoride and Conductivity results*
- h) Westinghouse Electric Company, in field elevation and depth to water forms*
- i) Isoconcentration maps for the parameters monitored for groundwater MCL exceedances, including Fluoride, Nitrate, Gross Alpha, and Gross Beta, AECOM*
- j) Water table surface map, AECOM*
- k) Contaminant trend plots, AECOM*
- l) Discussion of the water quality trends over the last two years, AECOM*
- m) PG signature, AECOM*

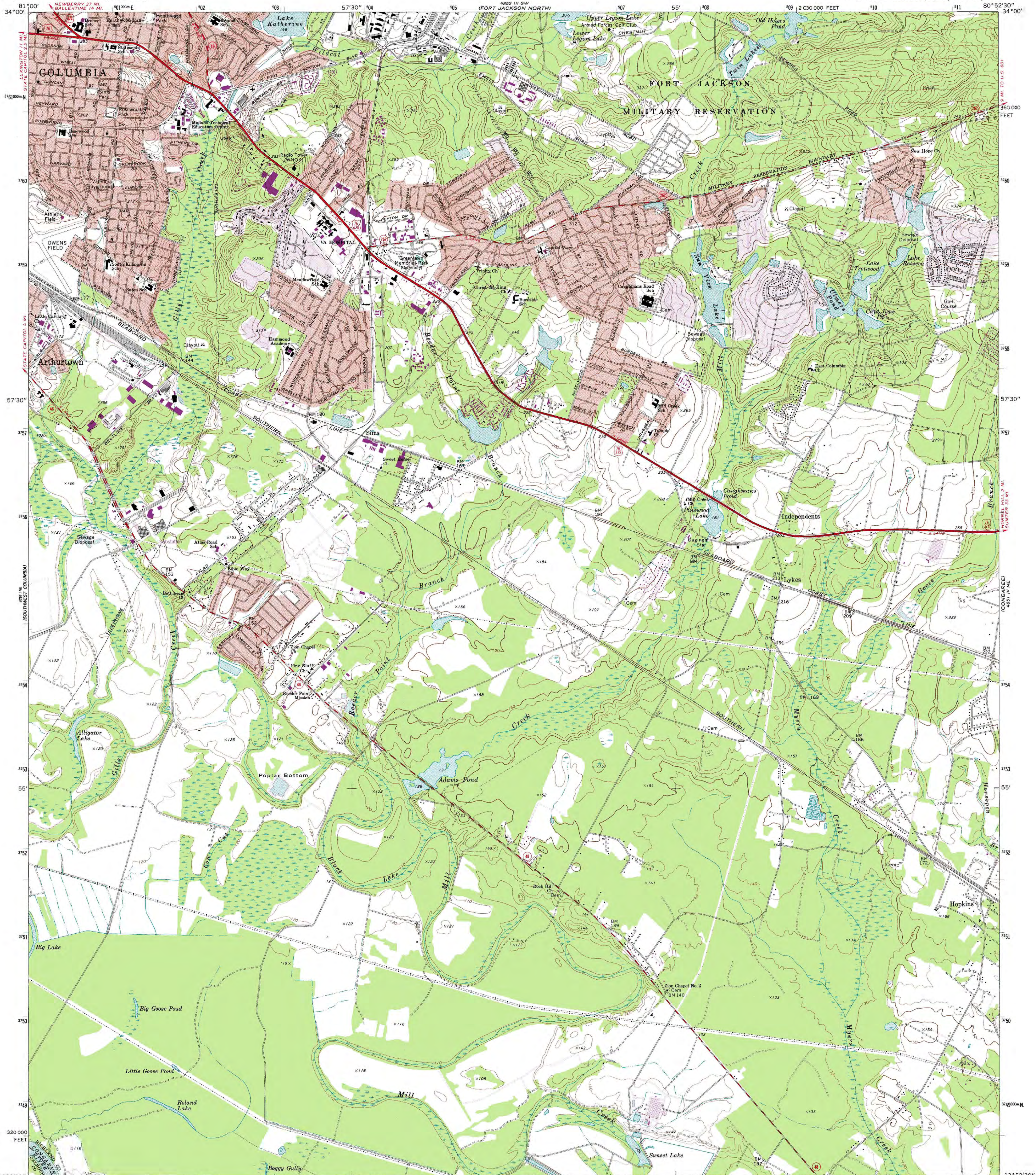
**Enclosure a)**

**Site Location Map, Topographic**



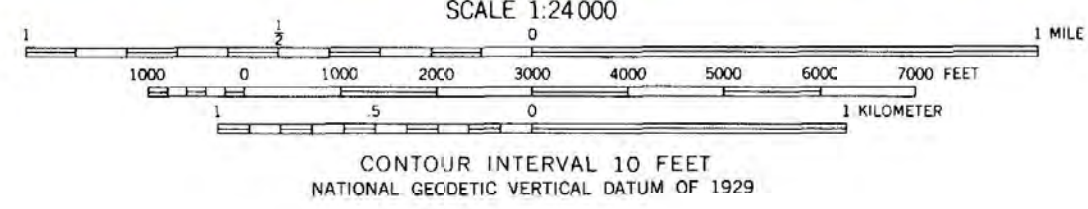
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

FORT JACKSON SOUTH QUADRANGLE  
SOUTH CAROLINA  
7.5 MINUTE SERIES (TOPOGRAPHIC)



Maped by the Army Map Service  
Edited and published by the Geological Survey  
Control by USGS, NOS/NOAA, USCE, and Tennessee  
Valley Authority  
Topography by photogrammetric methods from aerial  
photographs taken 1952. Field checked 1953  
Revised by the Geological Survey from aerial photographs  
taken 1971. Field checked 1972  
Polyconic projection. 10,000-foot grid ticks based on South  
Carolina coordinate system, north zone. 1000-meter  
Universal Transverse Mercator grid ticks, zone 17, shown  
in blue. 1927 North American Datum  
The difference between 1927 North American Datum and North American  
Datum of 1983 (NAD 83) for 7.5-minute intersections is given in USGS  
Bulletin 1875. The NAD 83 is shown by dashed corner ticks  
Fine red dashed lines indicate selected fence and field lines where  
generally visible on aerial photographs. This information is unchecked  
Red tint indicates areas in which only landmark buildings are shown  
There may be private inholdings within the boundaries  
of the National or State reservations shown on this map

Revisions shown in purple and woodland compiled by  
the Geological Survey from aerial photographs taken  
1980 and other sources. This information not field  
checked. Map edited 1982  
Purple tint indicates extension of urban areas



ROAD CLASSIFICATION  
Primary highway, hard surface  
Secondary highway, hard surface  
Interstate Route  
Light-duty road, hard or improved surface  
Unimproved road  
U. S. Route  
State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY  
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

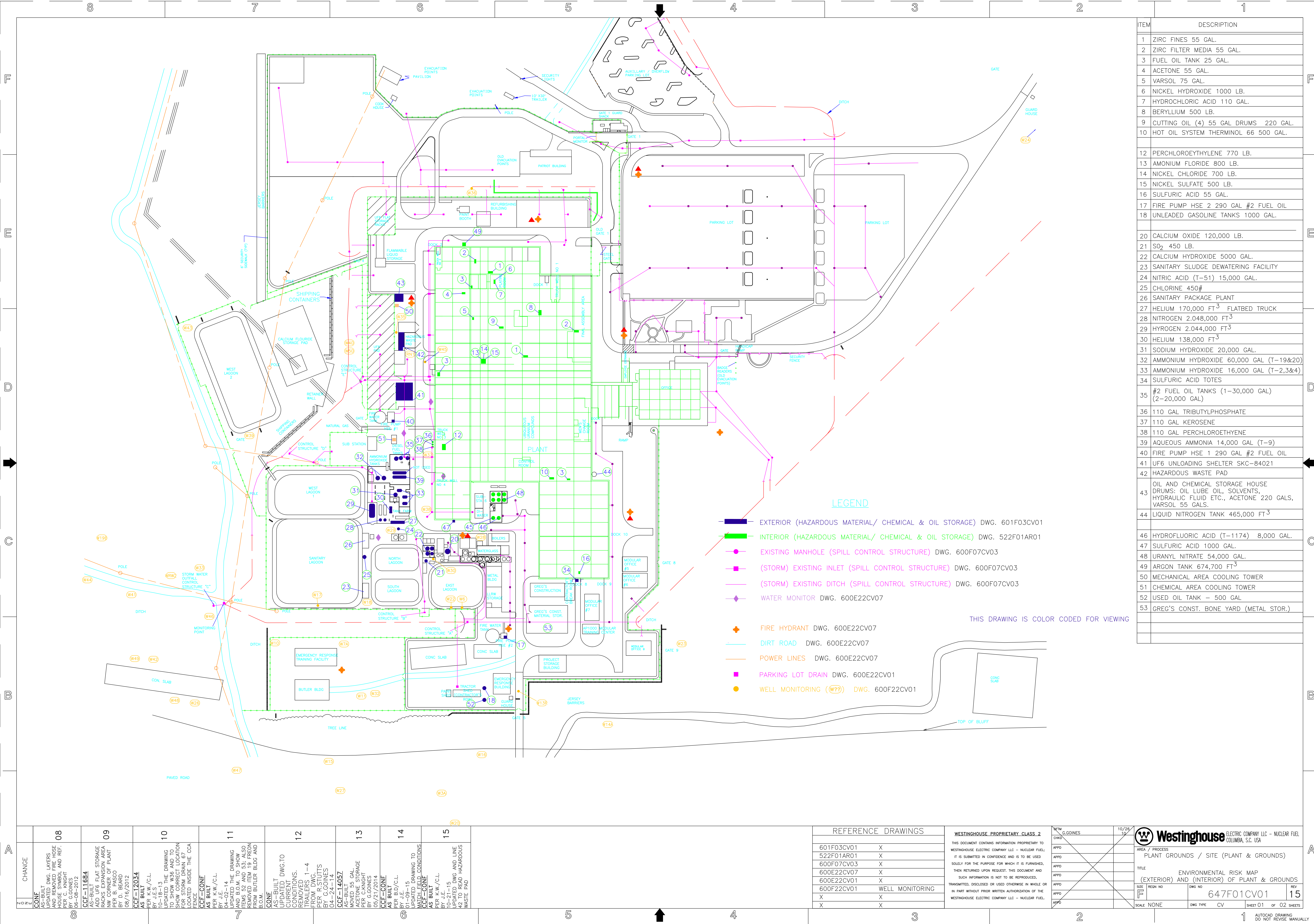
Map photospected 1987  
No major culture or drainage changes observed

FORT JACKSON SOUTH, S. C.  
33080-H8-TF-024  
PHOTOINSPECTED 1987  
PHOTOREVISED 1982  
DMA 4851 IV NW—SERIES V846



**Enclosure b)**

**Monitoring Well Location Map**





**Enclosure c)**

**Shealy Environmental Services Lab Reports  
VOC/SVOV Results and Bench Sheets**

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: PJ06010  
Date Completed: 10/14/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ06010\*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ06010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	W-26	Aqueous	10/06/2014 1042	10/06/2014
002	MW-41	Aqueous	10/06/2014 1022	10/06/2014
003	W-48	Aqueous	10/06/2014 1105	10/06/2014
004	RW-2	Aqueous	10/06/2014 1005	10/06/2014
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ06010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	MW-41	Aqueous	Tetrachloroethene	8260B	190		ug/L	12
002	MW-41	Aqueous	Trichloroethene	8260B	29		ug/L	12
003	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.5		ug/L	16
003	W-48	Aqueous	Tetrachloroethene	8260B	120		ug/L	17
004	RW-2	Aqueous	Tetrachloroethene	8260B	100		ug/L	22
004	RW-2	Aqueous	Trichloroethene	8260B	5.4		ug/L	22

(6 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-001
Description: W-26	Matrix: Aqueous
Date Sampled: 10/06/2014 1042	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1040	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1040	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1040	BTF		
1		(Water level )	1	10/06/2014 1040	BTF		
1		(Well Depth)	1	10/06/2014 1040	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.59			su	1
Specific Conductance @ 25° C - Field		120.1	169		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.0			° C	1
Water level depth from top of casing		No Method	26.22			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/10/2014 1934	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	10/10/2014 1934	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-001

Description: W-26

Matrix: Aqueous

Date Sampled: 10/06/2014 1042

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1257	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Level 1 Report v2.1

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-001
Description: W-26	Matrix: Aqueous
Date Sampled: 10/06/2014 1042	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1257	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		94	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		78	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		81	28-128
Terphenyl-d14		61	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-002
Description: MW-41	Matrix: Aqueous
Date Sampled: 10/06/2014 1022	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1022	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1022	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1022	BTF		
1		(Water level )	1	10/06/2014 1022	BTF		
1		(Well Depth)	1	10/06/2014 1022	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.37			su	1
Specific Conductance @ 25° C - Field		120.1	532		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.0			° C	1
Water level depth from top of casing		No Method	15.86			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 1957	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 1957	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	190		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	29		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/06/2014 1022

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1655	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 10/06/2014 1022

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1655	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		92	41-144
2-Fluorobiphenyl		97	37-129
2-Fluorophenol		74	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		84	28-128
Terphenyl-d14		79	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-003
Description: W-48	Matrix: Aqueous
Date Sampled: 10/06/2014 1105	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1105	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1105	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1105	BTF		
1		(Water level )	1	10/06/2014 1105	BTF		
1		(Well Depth)	1	10/06/2014 1105	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.54			su	1
Specific Conductance @ 25° C - Field		120.1	96.6		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.5			° C	1
Water level depth from top of casing		No Method	16.82			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2019	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.5		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2019	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-003

Description: W-48

Matrix: Aqueous

Date Sampled: 10/06/2014 1105

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1722	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-003

Description: W-48

Matrix: Aqueous

Date Sampled: 10/06/2014 1105

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/10/2014 1722	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		89	37-129
2-Fluorophenol		66	24-127
Nitrobenzene-d5		87	38-127
Phenol-d5		75	28-128
Terphenyl-d14		85	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: PJ06010-004
Description: RW-2	Matrix: Aqueous
Date Sampled: 10/06/2014 1005	
Date Received: 10/06/2014	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	10/06/2014 1005	BTF		
1		(Specific Con) 120.1	1	10/06/2014 1005	BTF		
1		(Temperature ) SM 2550B-2010	1	10/06/2014 1005	BTF		
1		(Water level )	1	10/06/2014 1005	BTF		
1		(Well Depth)	1	10/06/2014 1005	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.27			su	1
Specific Conductance @ 25° C - Field		120.1	309		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.2			° C	1
Water level depth from top of casing		No Method	18.40			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/06/2014 1005							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2042	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		100	ug/L	1
Acetonitrile	75-05-8	8260B	ND		100	ug/L	1
Acrolein	107-02-8	8260B	ND		100	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		100	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		10	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		25	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		10	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		10	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		5.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		10	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		10	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		5.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		5.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		10	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		25	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		250	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		25	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		25	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: PJ06010-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 10/06/2014 1005							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	10/10/2014 2042	EH1		58031

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		25	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		100	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	100		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.4		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		5.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/13/2014 1339	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

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ND = Not detected at or above the PQL

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P = The RPD between two GC columns exceeds 40%

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Shealy Environmental Services, Inc.

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Level 1 Report v2.1



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: PJ06010-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 10/06/2014 1005

Date Received: 10/06/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	10/13/2014 1339	RBH	10/08/2014 1753	57828

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		84	41-144
2-Fluorobiphenyl		96	37-129
2-Fluorophenol		79	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		83	28-128
Terphenyl-d14		58	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vanlauge Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
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Number 40054

[illegible]

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s). PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KUP 1/10-6-14 Lot #: PJ04010

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.2</u> / <u>12.0</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>-10.4</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KUP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		October 6, 2014		Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel		BTF, RA		Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name		Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: (Y) - N
Well ID #		N-26		Well Yield: Low - Mod. - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) =		32.00			
Depth To Groundwater (DGW) =		26.22			
Length Of Water Column (LWC) =		5.78			
1 Casing Volume (OCV) = LWC x		.163		= 0.94 gal.	
3 Casing Volumes =		2.83		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =				gal.	
Method of Well Evacuation		(TB) SSB WW GP Other			
Method of Sample Collection		(TB) SSB WW GP Other			

**Evacuation and Collection Methods**

TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)				Well Sample Time: 1042	
TIME (24 HOUR SYSTEM)				Remarks:	
pH (SU)					
WATER TEMPERATURE (°C.)					
SPECIFIC CONDUCTIVITY (UMHOS/CM)					
TURBIDITY (SUBJECTIVE)*					
ODOR (SUBJECTIVE)**					

<del>1035</del> 1st	.94	1.88	2.82		
1035	1037	1039	1040		
5.40	5.44	5.44	5.59		
18.3	18.1	18.1	18.0		
167.3	173.4	171.2	169.2		
5.42	23.9	27.0	22.9		
1	1	1	1		

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>October 6, 2014</b>		Casing Diameter: <u>2</u> inches	Casing Material: <u>(PVC)</u> - Metal
Field Personnel		<b>BTF, RA</b>		Guard Pipe: PVC - <u>(Metal)</u> - No	Locking Cap: <u>(Y)</u> N
Facility Name		<b>Westinghouse</b>		Protective Abutment: Y - <u>(N)</u>	Integrity Satisfactory: <u>(Y)</u> N
Well ID #	<u>MW-41</u>	Air Temperature		Well Yield: Low - Mod. - High	
Weather Conditions				Remarks:	
Total Well Depth (TWD) = <u>27.05</u>					
Depth To Groundwater (DGW) = <u>15.86</u>					
Length Of Water Column (LWC) = <u>11.19</u>					
1 Casing Volume (OCV) = LWC x <u>.163</u> = <u>1.8</u> gal.					
3 Casing Volumes = <u>5.47</u> gal. = Standard Evacuation Volume					
Total Volume of Water Removed =					
Method of Well Evacuation	<u>(TB)</u> SSB WW GP Other				
Method of Sample Collection	<u>(TB)</u> SSB WW GP Other				

**Evacuation and Collection Methods**

TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Granfos Pump

**Constants for Casing Diameters**

1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.8	3.6	5.4			
1015	1017	1020	1022			Well Sample Time: <u>1022</u>
4.90	5.16	5.27	5.37			Remarks:
19.4	19.3	19.3	19.0			
524	545	534	532			
3.74	33.4	32.7	39.2			
1	1	1	1			

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH      \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		October 6, 2014		Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel		BTF, RA		Guard Pipe: PVC (Metal) - No	Locking Cap: (Y) - N
Facility Name		Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: (Y) N
Well ID #		N-48		Well Yield: Low - Mod. - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) = 44.00					
Depth To Groundwater (DGW) = 27.18					
Length Of Water Column (LWC) = 16.82					
1 Casing Volume (OCV) = LWC x .1052 = 10.97 gal.					
3 Casing Volumes = 32.90 gal. = Standard Evacuation Volume					
Total Volume of Water Removed =					
Method of Well Evacuation		(TB) SSB (GP) Other			
Method of Sample Collection		(TB) SSB WW GP Other			

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1st	10.97	21.94	32.91					
TIME (24 HOUR SYSTEM)	1055	1100	1105						
pH (SU)	5.57	5.26	5.54						
WATER TEMPERATURE (°C.)	17.5	18.3	18.5						
SPECIFIC CONDUCTIVITY (UMHOS/CM)	106.9	103.6	96.6						
TURBIDITY (SUBJECTIVE)*	1100	34.0	22.7						
ODOR (SUBJECTIVE)**									

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Well Sample Time: 1105  
 Remarks: Dry At 21

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	October 6, 2014		Casing Diameter: 2 inches	Casing Material: <u>PVC</u> - Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - <u>Metal</u> - No	Locking Cap: <u>Y</u> - N
Facility Name	Westinghouse		Protective Abutment: Y <u>N</u>	Integrity Satisfactory: <u>Y</u> - N
Well ID #	RW-2		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		Remarks:	
Total Well Depth (TWD) =	31.25			
Depth To Groundwater (DGW) =	18.40			
Length Of Water Column (LWC) =	12.85			
1 Casing Volume (OCV) = LWC x	0.163 = 2.1			
3 Casing Volumes =	6.3			
Total Volume of Water Removed =	gal. = Standard Evacuation Volume			
Method of Well Evacuation	<u>TB</u> SSB WW GP Other			
Method of Sample Collection	<u>TB</u> SSB WW GP Other			

**Evacuation and Collection Methods**

TB - Tefton Bailer  
SSB - Stainless Steel Bailer  
WW - Well Wizard  
GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
5" = 1.02  
2" = 0.163  
6" = 1.47  
3" = 0.367  
7" = 2.00  
4" = 0.652  
8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
214	0955					
1	2.1	4.2	6.7			
1055	1000	1003	1005			
4.60	4.37	4.29	4.27			
19.0	18.9	19.2	19.2			
293.9	311.7	303.7	309.3			
5.82	20.3	24.7	40.2			
1	1	1	1			

Well Sample Time: 1005

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QA12017  
Date Completed: 01/19/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA12017 \*



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA12017

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA12017

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	W-26	Aqueous	01/12/2015 1012	01/12/2015
002	MW-41	Aqueous	01/12/2015 1052	01/12/2015
003	W-48	Aqueous	01/12/2015 0945	01/12/2015
004	RW-2	Aqueous	01/12/2015 1034	01/12/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA12017

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.1		ug/L	6
002	MW-41	Aqueous	cis-1,2-Dichloroethene	8260B	1.2		ug/L	11
002	MW-41	Aqueous	Tetrachloroethene	8260B	190		ug/L	12
002	MW-41	Aqueous	Trichloroethene	8260B	37		ug/L	12
003	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	5.4		ug/L	16
003	W-48	Aqueous	Tetrachloroethene	8260B	140		ug/L	17
003	W-48	Aqueous	Trichloroethene	8260B	4.0		ug/L	17
004	RW-2	Aqueous	Tetrachloroethene	8260B	110		ug/L	22
004	RW-2	Aqueous	Trichloroethene	8260B	6.3		ug/L	22

(9 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QA12017-001
Description: W-26	Matrix: Aqueous
Date Sampled: 01/12/2015 1012	
Date Received: 01/12/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 1010	BTF		
1		(Specific Con) 120.1	1	01/12/2015 1010	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 1010	BTF		
1		(Water level )	1	01/12/2015 1010	BTF		
1		(Well Depth)	1	01/12/2015 1010	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.79			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.8			° C	1
Water level depth from top of casing		No Method	26.19			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/12/2015 1012							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1405	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.1		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-001			
Description: W-26				Matrix: Aqueous			
Date Sampled: 01/12/2015 1012							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1405	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-001

Description: W-26

Matrix: Aqueous

Date Sampled: 01/12/2015 1012

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1905	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.2	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.2	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.2	ug/L	2
Anthracene	120-12-7	8270D	ND		5.2	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.2	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.2	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.2	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.2	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.2	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.2	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.2	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.2	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.2	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.2	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.2	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.2	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.2	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.2	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.2	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.2	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.2	ug/L	2
Chrysene	218-01-9	8270D	ND		5.2	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.2	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.2	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.2	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.2	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.2	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.2	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.2	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.2	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.2	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.2	ug/L	2
Fluorene	86-73-7	8270D	ND		5.2	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.2	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.2	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-001

Description: W-26

Matrix: Aqueous

Date Sampled: 01/12/2015 1012

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1905	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.2	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.2	ug/L	2
Isophorone	78-59-1	8270D	ND		5.2	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.2	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.2	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.2	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.2	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.2	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.2	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.2	ug/L	2
Phenol	108-95-2	8270D	ND		5.2	ug/L	2
Pyrene	129-00-0	8270D	ND		5.2	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.2	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.2	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		88	41-144
2-Fluorobiphenyl		98	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		94	28-128
Terphenyl-d14		96	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QA12017-002
Description: MW-41	Matrix: Aqueous
Date Sampled: 01/12/2015 1052	
Date Received: 01/12/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 1051	BTF		
1		(Specific Con) 120.1	1	01/12/2015 1051	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 1051	BTF		
1		(Water level )	1	01/12/2015 1051	BTF		
1		(Well Depth)	1	01/12/2015 1051	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.54			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	16.6			° C	1
Water level depth from top of casing		No Method	15.75			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	01/15/2015 1717	EH1		65476
2	5030B	8260B	1	01/16/2015 2232	PMM2		65592

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	2
Acetonitrile	75-05-8	8260B	ND		20	ug/L	2
Acrolein	107-02-8	8260B	ND		20	ug/L	2
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	2
Benzene	71-43-2	8260B	ND		1.0	ug/L	2
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	2
Bromoform	75-25-2	8260B	ND		1.0	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	2
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	2
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	2
Chloroform	67-66-3	8260B	ND		1.0	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	2
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	2
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	2
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	1.2		1.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	2
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	2
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	2
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	2
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	ug/L	2
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	2
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	2

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-002			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	01/15/2015 1717	EH1		65476
2	5030B	8260B	1	01/16/2015 2232	PMM2		65592

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	2
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	2
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	ug/L	2
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	2
Tetrachloroethene	127-18-4	8260B	190		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	2
Trichloroethene	79-01-6	8260B	37		1.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	2
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	2
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130		108	70-130
Bromofluorobenzene		108	70-130		98	70-130
Toluene-d8		102	70-130		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/12/2015 1052

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1929	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-002

Description: MW-41

Matrix: Aqueous

Date Sampled: 01/12/2015 1052

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1929	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		77	41-144
2-Fluorobiphenyl		98	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		94	28-128
Terphenyl-d14		98	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

## Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA12017-003

Description: W-48

Matrix: Aqueous

Date Sampled: 01/12/2015 0945

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 0944	BTF		
1		(Specific Con) 120.1	1	01/12/2015 0944	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 0944	BTF		
1		(Water level )	1	01/12/2015 0944	BTF		
1		(Well Depth)	1	01/12/2015 0944	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.69			su	1
Specific Conductance @ 25° C - Field		120.1	123		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.1			° C	1
Water level depth from top of casing		No Method	27.09			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1509	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.4		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-003			
Description: W-48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1509	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	4.0		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-003

Description: W-48

Matrix: Aqueous

Date Sampled: 01/12/2015 0945

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1952	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Level 1 Report v2.1

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-003

Description: W-48

Matrix: Aqueous

Date Sampled: 01/12/2015 0945

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 1952	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		77	41-144
2-Fluorobiphenyl		101	37-129
2-Fluorophenol		96	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		97	28-128
Terphenyl-d14		103	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QA12017-004
Description: RW-2	Matrix: Aqueous
Date Sampled: 01/12/2015 1034	
Date Received: 01/12/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	01/12/2015 1032	BTF		
1		(Specific Con) 120.1	1	01/12/2015 1032	BTF		
1		(Temperature ) SM 2550B-2010	1	01/12/2015 1032	BTF		
1		(Water level )	1	01/12/2015 1032	BTF		
1		(Well Depth)	1	01/12/2015 1032	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.41			su	1
Specific Conductance @ 25° C - Field		120.1	ND		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	18.4			° C	1
Water level depth from top of casing		No Method	18.42			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1427	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QA12017-004			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2015 1427	EH1		65476

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	110		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	6.3		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		2.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/12/2015 1034

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 2015	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.1	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.1	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.1	ug/L	2
Anthracene	120-12-7	8270D	ND		5.1	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.1	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		26	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.1	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.1	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.1	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.1	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.1	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.1	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.1	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		26	ug/L	2
Carbazole	86-74-8	8270D	ND		5.1	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.1	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.1	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.1	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.1	ug/L	2
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.1	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.1	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.1	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.1	ug/L	2
Chrysene	218-01-9	8270D	ND		5.1	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.1	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.1	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		26	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.1	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.1	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.1	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.1	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		26	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		26	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.1	ug/L	2
Fluorene	86-73-7	8270D	ND		5.1	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.1	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.1	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		26	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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Level 1 Report v2.1

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QA12017-004

Description: RW-2

Matrix: Aqueous

Date Sampled: 01/12/2015 1034

Date Received: 01/12/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	01/16/2015 2015	DRB1	01/15/2015 1607	65490

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.1	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.1	ug/L	2
Isophorone	78-59-1	8270D	ND		5.1	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.1	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.1	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.1	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.1	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.1	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.1	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		26	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		26	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.1	ug/L	2
Phenol	108-95-2	8270D	ND		5.1	ug/L	2
Pyrene	129-00-0	8270D	ND		5.1	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.1	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.1	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		80	41-144
2-Fluorobiphenyl		104	37-129
2-Fluorophenol		96	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		98	28-128
Terphenyl-d14		99	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1

### ***Chain of Custody Record***

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 44431

Client <b>Westinghouse</b>		Report to Contact <b>Samuel's Signature</b>		Telephone No. / E-mail		Quote No.	
Address		Sampler's Signature <b>[Signature]</b>		Analysis (Attach list if more space is needed)		Page <b>1</b> of <b>1</b>	
City	State	Zip Code	Printed Name <b>Brian Felbeck</b>		Barcode <b>QA12017</b>		
Project Name <b>Quaker-GW</b>		P.O. No.		Remarks / Order I.D.			
Sample ID / Description (Containers for each sample may be combined on one line.)		Date	Time				
W-26		1/12	1012				
MW-41		↓	1052				
W-48		↓	0945				
RW-2		↓	1034				

Sample ID / Description	Date	Time	Matrix				No. of Containers by Preservative Type				GC Requirements (Specify)		
			Agar	Acid	Alkaline	Other	Agar	Acid	Alkaline	Other			
W-26	1/12	1012	✓				2			3			
MW-41		1052	✓				2			3			
W-48		0945	✓				2			3			
RW-2		1034	✓				2			3			

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal		Possible Hazard Identification		GC Requirements (Specify)	
	Return to Client	Disposal by Lab	Non-Hazard	Hazardous	Unknown	Known
1. Relinquished by <b>[Signature]</b>	Date <b>1/12</b>	Time <b>1155</b>	1. Received by	2. Received by	3. Received by	4. Received by
2. Relinquished by	Date	Time				
3. Relinquished by	Date	Time				
4. Relinquished by	Date	Time				

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-40-133 Effective Date: 06-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 11-12-15 Lot #: QA1207

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.1</u> <u>12.0</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>-0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/H&M/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>11-12-15</u>		

Comments:

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 12, 2015		Casing Diameter:	2 inches	Casing Material:	PVC - Metal
Field Personnel		BTF, RA		Guard Pipe:	PVC - Metal - No	Looking Cap:	(Y) - N
Facility Name		Westinghouse		Protective Abutment:	Y - (N)	Integrity Satisfactory:	(Y) - N
Well ID #		W-210		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		210.22 - 32.00 RNA 01-12-15					
Depth To Groundwater (DGW) =		210.19					
Length Of Water Column (LWC) =		5.81					
1 Casing Volume (OCV) = LWC x		.163		=		.95 gal.	
3 Casing Volumes =		2.84		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		(TB) SSB WW GP Other					
Method of Sample Collection		(TB) SSB WW GP Other					

**Evacuation and Collection Methods**

TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	.95	1.9	2.85			
1004	1006	1008	1010			
5.69	5.72	5.79	5.79			
16.0	17.4	17.8	17.8			
0.2	0.2	0.2	0.2			
105	41.3	30.6	28.7			
1	1	1	1			

Well Sample Time: 1012

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH      \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 12, 2015		Casing Diameter:	inches	Casing Material:	PVC - Metal
Field Personnel		BTF, RA		Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Facility Name		Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #		MW-41		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		27.05					
Depth To Groundwater (DGW) =		15.75					
Length Of Water Column (LWC) =		11.3					
1 Casing Volume (OCV) = LWC x		0.143		= 1.84		gal.	
3 Casing Volumes =		5.52		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		TB	SSB	WW	GP	Other	
Method of Sample Collection		TB	SSB	WW	GP	Other	

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.84	3.08	5.52			
1043	1040	1049	1051			
5.50	5.59	5.52	5.54			
15.2	16.2	16.2	16.6			
0.5	0.5	0.5	0.5			
71000	21000	44.0	96.6			
1	1	1	1			

Well Sample Time: 1052

Remarks:

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH  
 \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

RNTH-12-15

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		January 12, 2015		Casing Diameter: 4 inches	Casing Material: PVC Metal
Field Personnel		BTF, RA		Guard Pipe: PVC Metal - No	Locking Cap: (Y) N
Facility Name		Westinghouse		Protective Abutment: Y (N)	Integrity Satisfactory: (Y) - N
Well ID# W-48				Well Yield: Low - Mod. - High	
Weather Conditions		Air Temperature		Remarks:	
Total Well Depth (TWD) = 44.00					
Depth To Groundwater (DGW) = 27.09					
Length Of Water Column (LWC) = 16.91					
1 Casing Volume (OCV) = LWC x 11.03		gal.			
3 Casing Volumes = 33.08		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =		gal.			
Method of Well Evacuation	TB	SSB	WW	GP	Other
Method of Sample Collection	(TB)	SSB	WW	GP	Other

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Gruntos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

## Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11.03	22.06	33.09			
0930	0942	0944				
5.57	5.59	5.69				
15.2	17.0	18.1				
136.1417	137.3	123.0				
39.9	19.1	15.8				
1	1					

Well Sample Time: 0945  
 Remarks: Dry at 22 Gal

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Date (MM-DD-YY)	January 12, 2015		
Field Personnel	BTF, RA		
Facility Name	Westinghouse		
Well ID #	RW-2		
Weather Conditions	Air Temperature	°C.	
Total Well Depth (TWD) =	31.25		
Depth To Groundwater (DGW) =	18.42		
Length Of Water Column (LWC) =	12.83		
1 Casing Volume (OCV) = LWC x	0.163	=	2.09 gal.
3 Casing Volumes =	6.27	gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation	TB	SSB	WW GP Other
Method of Sample Collection	TB	SSB	WW GP Other

Casing Diameter:	2 inches	Casing Material:	PVC - Metal
Guard Pipe:	PVC - Metal - No	Locking Cap:	Y - N
Protective Abutment:	Y - N	Integrity Satisfactory:	Y N
Well Yield:	Low - Mod. - High		
Remarks:			

Field Analyses RNA 1-12-15

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QD09062  
Date Completed: 04/15/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD09062 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	04/09/2015 0946	04/09/2015
002	W-26	Aqueous	04/09/2015 1057	04/09/2015
003	MW-41	Aqueous	04/09/2015 1009	04/09/2015
004	W-48	Aqueous	04/09/2015 1035	04/09/2015

(4 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD09062  
Project Name: Annual GWM  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	140		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	12		ug/L	7
003	MW-41	Aqueous	Tetrachloroethene	8260B	130		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	21		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	7.4		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	5.5		ug/L	22

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-001		
Description: RW-2			Matrix: Aqueous		
Date Sampled: 04/09/2015 0946			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 0946	BTF		
1		(Specific Con) 120.1	1	04/09/2015 0946	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 0946	BTF		
1		(Water level )	1	04/09/2015 0946	BTF		
1		(Well Depth)	1	04/09/2015 0946	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.32			su	1
Specific Conductance @ 25° C - Field		120.1	223		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.8			° C	1
Water level depth from top of casing		No Method	18.29			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0034	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0034	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	12		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1343	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 04/09/2015 0946				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1343	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		66	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		85	24-127
Nitrobenzene-d5		91	38-127
Phenol-d5		87	28-128
Terphenyl-d14		90	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-002		
Description: W-26			Matrix: Aqueous		
Date Sampled: 04/09/2015 1057			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1057	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1057	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1057	BTF		
1		(Water level )	1	04/09/2015 1057	BTF		
1		(Well Depth)	1	04/09/2015 1057	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.49			su	1
Specific Conductance @ 25° C - Field		120.1	162		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.4			° C	1
Water level depth from top of casing		No Method	25.30			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0058	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0058	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1454	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1454	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		74	41-144
2-Fluorobiphenyl		97	37-129
2-Fluorophenol		92	24-127
Nitrobenzene-d5		98	38-127
Phenol-d5		94	28-128
Terphenyl-d14		98	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-003		
Description: MW-41			Matrix: Aqueous		
Date Sampled: 04/09/2015 1009			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1009	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1009	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1009	BTF		
1		(Water level )	1	04/09/2015 1009	BTF		
1		(Well Depth)	1	04/09/2015 1009	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.7			su	1
Specific Conductance @ 25° C - Field		120.1	454		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	17.1			° C	1
Water level depth from top of casing		No Method	15.65			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0122	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0122	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	130		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	21		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1518	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QD09062-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 04/09/2015 1009

Project Name: Annual GWM

Date Received: 04/09/2015

Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1518	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		65	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		85	24-127
Nitrobenzene-d5		91	38-127
Phenol-d5		85	28-128
Terphenyl-d14		89	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Page: 19 of 24

Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: QD09062-004		
Description: W-48			Matrix: Aqueous		
Date Sampled: 04/09/2015 1035			Project Name: Annual GWM		
Date Received: 04/09/2015			Project Number:		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	04/09/2015 1035	BTF		
1		(Specific Con) 120.1	1	04/09/2015 1035	BTF		
1		(Temperature ) SM 2550B-2010	1	04/09/2015 1035	BTF		
1		(Water level )	1	04/09/2015 1035	BTF		
1		(Well Depth)	1	04/09/2015 1035	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.57			su	1
Specific Conductance @ 25° C - Field		120.1	110		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	20.5			° C	1
Water level depth from top of casing		No Method	26.17			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0145	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	7.4		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/15/2015 0145	PMM2		72520

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	5.5		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		103	70-130

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 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1542	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QD09062-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035				Project Name: Annual GWM			
Date Received: 04/09/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	04/13/2015 1542	RBH	04/11/2015 1750	72346

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		67	41-144
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		86	24-127
Nitrobenzene-d5		94	38-127
Phenol-d5		87	28-128
Terphenyl-d14		102	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Number 46126

[illegible]

Document Number: F-AO-139 Effective Date: 09-01-2014

Your Data in Laboratory with Sample(s): PINK-Field/Client Copy

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KNP: 4-9-15 Lot #: QDC9062

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>120/120</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (½" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/TFM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KNP</u> Verified by: _____ Date: <u>4-9-15</u>		

Comments:

# Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015		Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	BTF, RA		Guard Pipe: PVC - (Meta) - No	Locking Cap: (Y) - N
Facility Name	Westinghouse		Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) - N
Well ID #	RW-2		Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature		°C.	Remarks:
Total Well Depth (TWD) =	31.25			
Depth To Groundwater (DGW) =	18.29			
Length Of Water Column (LWC) =	12.96			
1 Casing Volume (OCV) = LWC x	0.163		= 2.11	gal.
3 Casing Volumes =	6.34		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =			gal.	
Method of Well Evacuation	(TB) SSB WW GP Other			
Method of Sample Collection	(TB) SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652  
 5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

## Field Analyses

RW-2-a-15

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	2.1	4.2	6.3	7.4		
0935	0940	0943	0946			
4.36	4.36	4.37	4.32			
18.6	18.4	17.7	17.8			
22.6	212.8	220.4	223.1			
>1000	39	24.3	31.5			
1	1	1	1			

Well Sample Time: 0946

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015			Casing Diameter: <u>2</u> inches	Casing Material: <u>PVC</u> - Metal
Field Personnel	BTF, RA			Guard Pipe: <u>PVC</u> - <u>(Metal)</u> No	Looking Cap: <u>(Y)</u> - N
Facility Name	Westinghouse			Protective Abutment: <u>(Y)</u> - <u>(N)</u>	Integrity Satisfactory: <u>(Y)</u> - N
Well ID #	W-210			Well Yield: Low - Mod. - High	
Weather Conditions	Air Temperature			Remarks:	
Total Well Depth (TWD) =	32.00				
Depth To Groundwater (DGW) =	25.30				
Length Of Water Column (LWC) =	10.70				
1 Casing Volume (OCV) = LWC x	.163 = 1.09 gal.				
3 Casing Volumes =	3.27 gal. = Standard Evacuation Volume				
Total Volume of Water Removed =	3.27 gal.				
Method of Well Evacuation	<input checked="" type="radio"/> SSB <input checked="" type="radio"/> WW <input type="radio"/> GP <input type="radio"/> Other				
Method of Sample Collection	<input checked="" type="radio"/> SSB <input checked="" type="radio"/> WW <input type="radio"/> GP <input type="radio"/> Other				

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092    5" = 1.02  
 2" = 0.163    6" = 1.47  
 3" = 0.367    7" = 2.00  
 4" = 0.652    8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.09	2.18	3.27			
1051	1053	1055	1057			
5.54	5.61	5.57	5.49			
20.5	19.6	19.1	19.4			
176.8	168.8	162.9	161.7			
9.98	21.1	23.4	21.4			
1	1	1	1			

Well Sample Time: 1057

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		April 9, 2015		Casing Diameter:	inches	Casing Material:	PVC - Metal
Field Personnel		BTF, RA		Guard Pipe:	PVC - Metal - No	Looking Cap:	Y - N
Facility Name		Westinghouse		Protective Abutment:	Y - N	Integrity Satisfactory:	Y - N
Well ID #		MW-41		Well Yield:	Low - Mod. - High		
Weather Conditions		Air Temperature		Remarks:			
Total Well Depth (TWD) =		27.05					
Depth To Groundwater (DGW) =		15.45					
Length Of Water Column (LWC) =		11.3					
1 Casing Volume (OCV) = LWC x		0.163 = 1.84					
3 Casing Volumes =		5.52		gal. = Standard Evacuation Volume			
Total Volume of Water Removed =				gal.			
Method of Well Evacuation		TB	SSB	WW	GP	Other	
Method of Sample Collection		TB	SSB	WW	GP	Other	

**Evacuation and Collection Methods**

TB - Teflon Bailer  
 SSB - Stainless Steel Bailer  
 WW - Well Wizard  
 GP - Grunfos Pump

**Constants for Casing Diameters**

1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.84	5.52	18.6	459.3	80.3	1
0959	1003	1005	5.71	5.69	5.70	
5.52	5.71	5.69	17.9	17.1		
18.6	18.3	17.9	17.1			
406.4	459.3	459.5	454.4			
71000	80.3	35.5	25.2			
1	1	1				

Well Sample Time: 1001

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	April 9, 2015	
Field Personnel	BTF, RA	
Facility Name	Westinghouse	
Well ID #	W-48	
Weather Conditions	Air Temperature _____ °C.	
Total Well Depth (TWD) =	44.00	
Depth To Groundwater (DGW) =	20.17	
Length Of Water Column (LWC) =	17.83	
1 Casing Volume (OCV) = LWC x .652	= 11.62 gal.	
3 Casing Volumes =	34.8 gal. = Standard Evacuation Volume	
Total Volume of Water Removed =	gal.	
Method of Well Evacuation	TB SSB WW GP Other	
Method of Sample Collection	TB SSB WW GP Other	

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11:02	23.24	24.8			
10:24	10:29	10:35				
5.53	5.49	5.57				
20.40	20.5	20.5				
135.4	123.2	109.5				
28.5	80.1	33.1				
1	1	1				

Well Sample Time: 10:35  
 Remarks:

Dry @ 23.24  
 RHA 4-9-15

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
 \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Annual GWM

Lot Number: QG10020  
Date Completed: 07/22/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG10020

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QG10020

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RW-2	Aqueous	07/10/2015 0932	07/10/2015
002	W-26	Aqueous	07/10/2015 1010	07/10/2015
003	MW-41	Aqueous	07/10/2015 0953	07/10/2015
004	W-48	Aqueous	07/10/2015 1050	07/10/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG10020

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RW-2	Aqueous	Tetrachloroethene	8260B	120		ug/L	7
001	RW-2	Aqueous	Trichloroethene	8260B	8.9		ug/L	7
002	W-26	Aqueous	cis-1,2-Dichloroethene	8260B	1.0		ug/L	11
003	MW-41	Aqueous	Tetrachloroethene	8260B	140		ug/L	17
003	MW-41	Aqueous	Trichloroethene	8260B	21		ug/L	17
004	W-48	Aqueous	cis-1,2-Dichloroethene	8260B	6.1		ug/L	21
004	W-48	Aqueous	Tetrachloroethene	8260B	170		ug/L	22
004	W-48	Aqueous	Trichloroethene	8260B	7.7		ug/L	22

(8 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-001
Description: RW-2	Matrix: Aqueous
Date Sampled: 07/10/2015 0932	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH - Field) SM 4500-H B-2011	1	07/10/2015 0932	BTF		
1		(Specific Con) 120.1	1	07/10/2015 0932	BTF		
1		(Temperature ) SM 2550B-2010	1	07/10/2015 0932	BTF		
1		(Water level )	1	07/10/2015 0932	BTF		
1		(Well Depth)	1	07/10/2015 0932	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	4.51			su	1
Specific Conductance @ 25° C - Field		120.1	252		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.9			° C	1
Water level depth from top of casing		No Method	18.09			feet	1
Well Depth		No Method	31.25			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1239	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1239	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	120		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	8.9		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-001

Description: RW-2

Matrix: Aqueous

Date Sampled: 07/10/2015 0932

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1134	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-001			
Description: RW-2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1134	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		88	41-144
2-Fluorobiphenyl		113	37-129
2-Fluorophenol		100	24-127
Nitrobenzene-d5		113	38-127
Phenol-d5		109	28-128
Terphenyl-d14		116	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-002
Description: W-26	Matrix: Aqueous
Date Sampled: 07/10/2015 1010	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 1010	BTF		
1		(Specific Con) 120.1	1	07/10/2015 1010	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 1010	BTF		
1		(Water level )	1	07/10/2015 1010	BTF		
1		(Well Depth)	1	07/10/2015 1010	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.67			su	1
Specific Conductance @ 25° C - Field		120.1	188		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	19.5			° C	1
Water level depth from top of casing		No Method	25.72			feet	1
Well Depth		No Method	32.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1303	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.0		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1303	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-002

Description: W-26

Matrix: Aqueous

Date Sampled: 07/10/2015 1010

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1223	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-002			
Description: W-26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1223	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		98	41-144
2-Fluorobiphenyl		111	37-129
2-Fluorophenol		93	24-127
Nitrobenzene-d5		108	38-127
Phenol-d5		101	28-128
Terphenyl-d14		124	10-148

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-003
Description: MW-41	Matrix: Aqueous
Date Sampled: 07/10/2015 0953	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 0953	BTF		
1		(Specific Con) 120.1	1	07/10/2015 0953	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 0953	BTF		
1		(Water level )	1	07/10/2015 0953	BTF		
1		(Well Depth)	1	07/10/2015 0953	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.49			su	1
Specific Conductance @ 25° C - Field		120.1	537		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.2			° C	1
Water level depth from top of casing		No Method	15.50			feet	1
Well Depth		No Method	27.05			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1327	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-003			
Description: MW-41				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1327	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	140		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	21		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 07/10/2015 0953

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1808	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-003

Description: MW-41

Matrix: Aqueous

Date Sampled: 07/10/2015 0953

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1808	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		92	41-144
2-Fluorobiphenyl		113	37-129
2-Fluorophenol		107	24-127
Nitrobenzene-d5		116	38-127
Phenol-d5		115	28-128
Terphenyl-d14		123	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: QG10020-004
Description: W-48	Matrix: Aqueous
Date Sampled: 07/10/2015 1050	
Date Received: 07/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(pH - Field)	SM 4500-H B-2011	1	07/10/2015 1050	BTF		
1		(Specific Con) 120.1	1	07/10/2015 1050	BTF		
1	(Temperature )	SM 2550B-2010	1	07/10/2015 1050	BTF		
1		(Water level )	1	07/10/2015 1050	BTF		
1		(Well Depth)	1	07/10/2015 1050	BTF		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH - Field		SM 4500-H B	5.7			su	1
Specific Conductance @ 25° C - Field		120.1	106		1.00	umhos/cm	1
Temperature - Field		SM 2550B-20	21.3			° C	1
Water level depth from top of casing		No Method	26.80			feet	1
Well Depth		No Method	44.00			feet	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1351	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Acetonitrile	75-05-8	8260B	ND		20	ug/L	1
Acrolein	107-02-8	8260B	ND		20	ug/L	1
Acrylonitrile	107-13-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	ug/L	1
Bromochloromethane	74-97-5	8260B	ND		1.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	ug/L	1
2-Chloro-1,3-Butadiene (Chloroprene)	126-99-8	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	ug/L	1
3-Chloropropene (Allyl chloride)	107-05-1	8260B	ND		2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	ug/L	1
Dibromomethane (Methylene bromide)	74-95-3	8260B	ND		1.0	ug/L	1
trans-1,4-Dichloro-2-butene	110-57-6	8260B	ND		2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.1		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	ug/L	1
1,3-Dichloropropane	142-28-9	8260B	ND		1.0	ug/L	1
2,2-Dichloropropane	594-20-7	8260B	ND		1.0	ug/L	1
1,1-Dichloropropene	563-58-6	8260B	ND		2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	ug/L	1
Ethyl methacrylate	97-63-2	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isobutyl alcohol	78-83-1	8260B	ND		50	ug/L	1
Methacrylonitrile	126-98-7	8260B	ND		5.0	ug/L	1
Methyl iodide (Iodomethane)	74-88-4	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company				Laboratory ID: QG10020-004			
Description: W-48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/16/2015 1351	EH1		79814

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Methyl methacrylate	80-62-6	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Propionitrile (Ethyl cyanide)	107-12-0	8260B	ND		20	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-Tetrachloroethane	630-20-6	8260B	ND		1.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	170		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260B	7.7		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	ug/L	1
1,2,3-Trichloropropane	96-18-4	8260B	ND		1.0	ug/L	1
Vinyl acetate	108-05-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-004

Description: W-48

Matrix: Aqueous

Date Sampled: 07/10/2015 1050

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1312	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	2
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	2
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	2
Anthracene	120-12-7	8270D	ND		5.0	ug/L	2
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	2
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	2
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	2
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	2
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	2
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	2
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	2
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	2
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	2
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	2
Caprolactam	105-60-2	8270D	ND		25	ug/L	2
Carbazole	86-74-8	8270D	ND		5.0	ug/L	2
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	2
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	2
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	2
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	2
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	2
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	2
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	2
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	2
Chrysene	218-01-9	8270D	ND		5.0	ug/L	2
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	2
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	2
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	2
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	2
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	2
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	2
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	2
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	2
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	2
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	2
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	2
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	2
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	2
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	2
Fluorene	86-73-7	8270D	ND		5.0	ug/L	2
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	2
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	2
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: QG10020-004

Description: W-48

Matrix: Aqueous

Date Sampled: 07/10/2015 1050

Date Received: 07/10/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3520C	8270D	1	07/20/2015 1312	JCG	07/17/2015 0929	79921

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	2
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	2
Isophorone	78-59-1	8270D	ND		5.0	ug/L	2
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	2
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	2
3 & 4-Methylphenol	106-44-5	8270D	ND		10	ug/L	2
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	2
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	2
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	2
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	2
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	2
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	2
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	2
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	2
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	2
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	2
Phenol	108-95-2	8270D	ND		5.0	ug/L	2
Pyrene	129-00-0	8270D	ND		5.0	ug/L	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	2
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		91	41-144
2-Fluorobiphenyl		112	37-129
2-Fluorophenol		100	24-127
Nitrobenzene-d5		111	38-127
Phenol-d5		109	28-128
Terphenyl-d14		130	10-148

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 49022

[illegible]

**DISTRIBUTION:** WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Clinic Copy

Document Number: F-AO-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: MM/07/15 Lot #: 0210020

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>1373.7°C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0.0°C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>MM</u> Verified by: _____ Date: <u>7/15/15</u>		

Comments:

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		JULY 10, 2015	
Field Personnel		BTF,RA	
Facility Name		Westinghouse	
Well ID #		RW-2	
Weather Conditions		Air Temperature	
Total Well Depth (TWD) =		31.25	
Depth To Groundwater (DGW) =		18.09	
Length Of Water Column (LWC) =		13.16	
1 Casing Volume (OCV) = LWC x		0.163 = 2.14 gal.	
3 Casing Volumes =		gal. = Standard Evacuation Volume	
Total Volume of Water Removed =		gal.	
Method of Well Evacuation		(TB) SSB WW GP Other	
Method of Sample Collection		(TB) SSB WW GP Other	

**Evacuation and Collection Methods**  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Gruntos Pump

**Constants for Casing Diameters**  
 1.5" = 0.092      5" = 1.02  
 2" = 0.163      6" = 1.47  
 3" = 0.367      7" = 2.00  
 4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1"	2.14	4.28	6.42	Well Sample Time:
TIME (24 HOUR SYSTEM)	0919	0922	0926	0932	0932
pH (SU)	5.94	5.03	4.53	4.51	Remarks:
WATER TEMPERATURE (°C)	21.7	19.9	19.2	19.9	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	232.2	246.1	247.9	251.6	
TURBIDITY (SUBJECTIVE)*	7.6	18.4	18.7	21.6	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR    2 = SLIGHT    3 = MODERATE    4 = HIGH      \*\* 1 = NONE    2 = FAINT    3 = MODERATE    4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)	JULY 10, 2015		
Field Personnel	BTF, RA		
Facility Name	Westinghouse		
Well ID #	W-26		
Weather Conditions	Air Temperature		°C.
Total Well Depth (TWD) =	32.00		
Depth To Groundwater (DGW) =	25.72		
Length Of Water Column (LWC) =	6.28		
1 Casing Volume (OCV) = LWC x 0.163	= 1.0		gal.
3 Casing Volumes =			gal. = Standard Evacuation Volume
Total Volume of Water Removed =			gal.
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

Evacuation and Collection Methods  
TB - Teflon Bailor  
SSB - Stainless Steel Bailor  
WW - Well Wizard  
GP - Grunfos Pump

Constants for Casing Diameters  
1.5" = 0.092      5" = 1.02  
2" = 0.163      6" = 1.47  
3" = 0.367      7" = 2.00  
4" = 0.652      8" = 2.61

### Field Analyses

VOLUME PURGED (GALLONS)	1'	1.0	2.0	3.0	Well Sample Time: 1010
TIME (24 HOUR SYSTEM)	1002	1006	1008	1010	Remarks:
pH (SU)	5.72	5.70	5.63	5.67	
WATER TEMPERATURE (°C.)	21.4	20.1	21.0	19.5	
SPECIFIC CONDUCTIVITY (UMHOS/CM)	218.5	200.9	206.2	188.4	
TURBIDITY (SUBJECTIVE)*	24.6	37.3	27.0	35.4	
ODOR (SUBJECTIVE)**	1	1	1	1	

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH  
\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		JULY 10, 2015	
Field Personnel		BTF, RA	
Facility Name		Westinghouse	
Well ID # 14W-11		Air Temperature	
Weather Conditions		°C.	
Total Well Depth (TWD) = 27.65		Remarks:	
Depth To Groundwater (DGW) = 15.50		Casing Diameter: inches	
Length Of Water Column (LWC) = 11.55		Guard Pipe: PVC - Metal - No	
1 Casing Volume (OCV) = LWC x 0.167 = 1.9		Protective Abutment: Y - N	
3 Casing Volumes =		Well Yield: Low - Mod. - High	
Total Volume of Water Removed =		Integrity Satisfactory: Y - N	
Method of Well Evacuation		Casing Material: PVC - Metal	
Method of Sample Collection		Locking Cap: Y - N	
TB SSB WW GP Other			
TB SSB WW GP Other			

Evacuation and Collection Methods  
 TB - Teflon Bailor  
 SSB - Stainless Steel Bailor  
 WW - Well Wizard  
 GP - Grunfos Pump

Constants for Casing Diameters  
 1.5" = 0.092  
 2" = 0.163  
 3" = 0.367  
 4" = 0.652

5" = 1.02  
 6" = 1.47  
 7" = 2.00  
 8" = 2.61

gal. = Standard Evacuation Volume

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	1.9	3.8	5.7			
0943	0946	0949	0953			
5.48	5.46	5.51	5.49			
21.4	25.1	21.2	21.2			
516	569	558	537			
50.9	29.4	26.3	31.6			
1	1	1	1			

Well Sample Time: 0953

Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

\*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG



## Field Data Information Sheet For Groundwater Sampling

Date (MM-DD-YY)		<b>JULY 10, 2015</b>	
Field Personnel		<b>BTF, RA</b>	
Facility Name		<b>Westinghouse</b>	
Well ID #	<b>W-48</b>	Air Temperature	°C.
Weather Conditions			
Total Well Depth (TWD) =	<b>44.00</b>		
Depth To Groundwater (DGW) =	<b>26.80</b>		
Length Of Water Column (LWC) =	<b>17.2</b>		
1 Casing Volume (OCV) = LWC x	<b>.652</b>	=	<b>11.2</b> gal.
3 Casing Volumes =	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	TB	SSB	WW
Method of Sample Collection	<u>TB</u>	SSB	WW
Evacuation and Collection Methods			
TB - Teflon Bailor SSB - Stainless Steel Bailor WW - Well Wizard GP - Granfos Pump			
Constants for Casing Diameters 1.5" = 0.092    5" = 1.02 2" = 0.163    6" = 1.47 3" = 0.367    7" = 2.00 4" = 0.652    8" = 2.61			

### Field Analyses

VOLUME PURGED (GALLONS)	TIME (24 HOUR SYSTEM)	pH (SU)	WATER TEMPERATURE (°C.)	SPECIFIC CONDUCTIVITY (UMHOS/CM)	TURBIDITY (SUBJECTIVE)*	ODOR (SUBJECTIVE)**
1st	11.2	22.4	33.6			
1027	1034	1041	1050			
5.92	6.23	5.68	5.70			
22.4	25.6	20.5	21.3			
1225	117.9	107.9	106.3			
131	25.8	9.36	3.74			
1	1	1	1			

ENTH  
7-10-85

Well Sample Time: **1050**  
Remarks:

\* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH    \*\* 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

**Enclosure d)**

**Shealy Environmental Services Lab Reports  
Nitrate Results**

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06011

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ06011

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #RW2	Aqueous	10/06/2014 1005	10/06/2014
002	Well #41R	Aqueous	10/06/2014 1022	10/06/2014
003	Well #26	Aqueous	10/06/2014 1042	10/06/2014
004	Well #45	Aqueous	10/06/2014 1105	10/06/2014
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: PJ06011

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #RW2	Aqueous	Nitrate - N	353.2	33		mg/L	5
002	Well #41R	Aqueous	Nitrate - N	353.2	62		mg/L	6
003	Well #26	Aqueous	Nitrate - N	353.2	3.3		mg/L	7
004	Well #45	Aqueous	Nitrate - N	353.2	4.5		mg/L	8
(4 detections)								

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-001			
Description: Well #RW2				Matrix: Aqueous			
Date Sampled: 10/06/2014 1005							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/07/2014 1056	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	33		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-002			
Description: Well #41R				Matrix: Aqueous			
Date Sampled: 10/06/2014 1022							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	10/07/2014 1104	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	62		0.80	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-003			
Description: Well #26				Matrix: Aqueous			
Date Sampled: 10/06/2014 1042							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1101	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.3		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06011-004			
Description: Well #45				Matrix: Aqueous			
Date Sampled: 10/06/2014 1105							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	5	10/07/2014 1102	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	4.5		0.10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 06086

Client: Westinhouse LLC		Report to Contact: Cynthia Colodan		Sampler (Printed Name): E. Colodan		Quote No.
Address: 801 Bluff Rd		Telephone No. / Fax No. / Email: 647-3171		Waybill No.		Page
City: Hopkins	State: SC	Zip Code: 29061	Number of Containers: 4			
Project Name: Hopkins			Bottle (See Instructions on back):			
Preservative:			Preservative:			
1. Unpres.			4. HNO3			
2. NaOH/ZnA			5. HCL			
3. H2SO4			6. Na Thio.			
P.O. Number		Matrix		Analysis		
Sample ID / Description (Containers for each sample may be continued on one line)	Date	Time	Matrix	Analysis		
W211 #2W2	10/6/14	1005	G	Groundwater		
W211 #412	10/6/14	1022	G			
W211 #26	10/6/14	1042	G			
W211 #48	10/6/14	1105	G			
Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		Possible Hazard Identification		
Standard <input type="checkbox"/> Rush (Please Specify)	Return to Client <input type="checkbox"/> Dispose by Lab <input checked="" type="checkbox"/>	Date: 10/6/14 Time: 1115		Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>		
Relinquished by: R. Colodan	Date: 10/6/14	Time: 1115	1. Received by: [Signature] Date: 10/6/14 Time: 1115			
2. Relinquished by:	Date:	Time:	2. Received by: Date: Time:			
3. Relinquished by:	Date:	Time:	3. Received by: Date: Time:			
4. Relinquished by: [Signature]	Date: 10/6/14	Time: 1245	4. Laboratory Received by: [Signature] Date: 10-6-14 Time: 1245			
Note: All samples are retained for six weeks from receipt unless other arrangements are made.			LAB USE ONLY Received on (or off) pack: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Ice Pack: Yes <input type="checkbox"/> No <input type="checkbox"/> Receipt Temp: 21.0 °C			
			Temp. Blank: [Signature] 10/6/14			

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 10-6-14 Lot #: P106011

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>182.6</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>+0.4</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ06035  
Date Completed: 10/07/2014



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ06035 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ06035

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

---

## Sample Summary Westinghouse Electric Company Lot Number: PJ06035

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #24	Aqueous	10/06/2014 0907	10/06/2014
002	Well #33	Aqueous	10/06/2014 1136	10/06/2014
003	Well #44	Aqueous	10/06/2014 1200	10/06/2014
004	Well #15	Aqueous	10/06/2014 1222	10/06/2014
005	Well #23R	Aqueous	10/06/2014 1350	10/06/2014
006	Well #14	Aqueous	10/06/2014 1415	10/06/2014
007	Well #16	Aqueous	10/06/2014 1430	10/06/2014
008	Well #27	Aqueous	10/06/2014 1445	10/06/2014

(8 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ06035

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #24	Aqueous	Nitrate - N	353.2	0.055		mg/L	5
002	Well #33	Aqueous	Nitrate - N	353.2	10		mg/L	6
003	Well #44	Aqueous	Nitrate - N	353.2	3.8		mg/L	7
004	Well #15	Aqueous	Nitrate - N	353.2	24		mg/L	8
005	Well #23R	Aqueous	Nitrate - N	353.2	0.93		mg/L	9
006	Well #14	Aqueous	Nitrate - N	353.2	0.44		mg/L	10
007	Well #16	Aqueous	Nitrate - N	353.2	2.9		mg/L	11

(7 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-001			
Description: Well #24				Matrix: Aqueous			
Date Sampled: 10/06/2014 0907							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1030	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.055		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-002			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 10/06/2014 1136							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	5	10/07/2014 1052	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	10		0.10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-003			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 10/06/2014 1200							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1053	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.8		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-004			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 10/06/2014 1222							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/07/2014 1103	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	24		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-005			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 10/06/2014 1350							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1036	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.93		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-006			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 10/06/2014 1415							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1037	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.44		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-007			
Description: Well #16				Matrix: Aqueous			
Date Sampled: 10/06/2014 1430							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	10/07/2014 1055	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ06035-008			
Description: Well #27				Matrix: Aqueous			
Date Sampled: 10/06/2014 1445							
Date Received: 10/06/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/07/2014 1042	BLB		57703

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06087

Client <b>Westinghouse Ele Co</b>		Report to Contact <b>Cynthia Logsdon</b>		Sampler (Printed Name) <b>R. Gross</b>		Quote No.
Address <b>5801 Bluff Rd</b>		Telephone No. / Fax No. / Email <b>643-3171</b>		Waybill No.		Page of
City <b>Hopkins</b>	State <b>SC</b>	Zip Code <b>29001</b>	Preservative			
Project Name			Bottle (See instructions on back)			
Project Number			Preservative			
Sample ID / Description (Containers for each sample may be combined on one line)			Date	Time	Matrix	
					C-Composite	
					G-Grab	
					GWL DWI WWS	
					S	
					Other	
W211 #24			10/6/14	0907	G	
W211 #33			10/6/14	1136	G	
W211 #44			10/6/14	1200	G	
W211 #15			10/6/14	1222	G	
W211 #232			10/6/14	1350	G	
W211 #14			10/6/14	1415	G	
W211 #16			10/6/14	1430	G	
W211 #27			10/6/14	1445	G	
Analysis			Groundwater			
Possible Hazard Identification			<input checked="" type="checkbox"/> Acid-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
QC Requirements (Specify)			1. Received by <b>C. Logsdon</b> Date <b>10-6-14</b> Time <b>1525</b> 2. Received by _____ Date _____ Time _____ 3. Received by _____ Date _____ Time _____ 4. Laboratory Received by <b>deborah</b> Date <b>10-6-14</b> Time <b>1650</b>			
Sample Disposal			<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab Date <b>10/6/14</b> Time <b>1525</b> Date <b>10-6-14</b> Time <b>1650</b> Date _____ Time _____ Date _____ Time _____			
Turn Around Time Required (Prior lab approval required for expedited TAT)			<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			
1. Relinquished by / Sampler			<b>R. Gross</b> Date <b>10-6-14</b> Time <b>1525</b>			
2. Relinquished by			<b>C. Logsdon</b> Date <b>10-6-14</b> Time <b>1650</b>			
3. Relinquished by			Date _____ Time _____			
4. Relinquished by			Date _____ Time _____			
Note: All samples are retained for six weeks from receipt unless other arrangements are made.			Receipt Temp. <b>13.4</b> °C Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP / 10-6-14 Lot #: P106035

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>13.3 / 13.4</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>+0.4</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>10-6-14</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ07035  
Date Completed: 10/16/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ07035 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ07035

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary Westinghouse Electric Company Lot Number: PJ07035

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL#38	Aqueous	10/07/2014 0847	10/07/2014
002	WELL#38 DUPLICATE	Aqueous	10/07/2014 0847	10/07/2014
003	WELL#29	Aqueous	10/07/2014 0911	10/07/2014
004	WELL#30	Aqueous	10/07/2014 0931	10/07/2014
005	WELL#22	Aqueous	10/07/2014 0954	10/07/2014
006	WELL#18	Aqueous	10/07/2014 1012	10/07/2014
007	WELL#28	Aqueous	10/07/2014 1042	10/07/2014
008	WELL#13R	Aqueous	10/07/2014 1110	10/07/2014
009	WELL#13R DUPLICATE	Aqueous	10/07/2014 1110	10/07/2014
010	WELL#7	Aqueous	10/07/2014 1133	10/07/2014
011	WELL#10	Aqueous	10/07/2014 1155	10/07/2014
012	WELL#20	Aqueous	10/07/2014 1407	10/07/2014
013	WELL#32	Aqueous	10/07/2014 1437	10/07/2014

(13 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: PJ07035

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL#38	Aqueous	Nitrate - N	353.2	12		mg/L	5
002	WELL#38 DUPLICATE	Aqueous	Nitrate - N	353.2	12		mg/L	6
003	WELL#29	Aqueous	Nitrate - N	353.2	72		mg/L	7
004	WELL#30	Aqueous	Nitrate - N	353.2	46		mg/L	8
005	WELL#22	Aqueous	Nitrate - N	353.2	240		mg/L	9
006	WELL#18	Aqueous	Nitrate - N	353.2	680		mg/L	10
007	WELL#28	Aqueous	Nitrate - N	353.2	1.7		mg/L	11
008	WELL#13R	Aqueous	Nitrate - N	353.2	30		mg/L	12
009	WELL#13R DUPLICATE	Aqueous	Nitrate - N	353.2	31		mg/L	13
010	WELL#7	Aqueous	Nitrate - N	353.2	200		mg/L	14
011	WELL#10	Aqueous	Nitrate - N	353.2	86		mg/L	15
013	WELL#32	Aqueous	Nitrate - N	353.2	160		mg/L	17

(12 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-001			
Description: WELL#38				Matrix: Aqueous			
Date Sampled: 10/07/2014 0847							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/08/2014 1826	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-002			
Description: WELL#38 DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/07/2014 0847							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/08/2014 1905	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-003			
Description: WELL#29				Matrix: Aqueous			
Date Sampled: 10/07/2014 0911							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	10/08/2014 2022	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	72		0.80	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-004			
Description: WELL#30				Matrix: Aqueous			
Date Sampled: 10/07/2014 0931							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	10/08/2014 2023	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	46		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ07035-005

Description: WELL#22

Matrix: Aqueous

Date Sampled: 10/07/2014 0954

Date Received: 10/07/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	150	10/08/2014 2024	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	240		3.0	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

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# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-006			
Description: WELL#18				Matrix: Aqueous			
Date Sampled: 10/07/2014 1012							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	500	10/08/2014 2040	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	680		10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-007			
Description: WELL#28				Matrix: Aqueous			
Date Sampled: 10/07/2014 1042							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/08/2014 1910	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	1.7		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-008			
Description: WELL#13R				Matrix: Aqueous			
Date Sampled: 10/07/2014 1110							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/08/2014 2026	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-009			
Description: WELL#13R DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/07/2014 1110							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	10/08/2014 2027	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	31		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-010			
Description: WELL#7				Matrix: Aqueous			
Date Sampled: 10/07/2014 1133							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	10/08/2014 2029	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	200		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-011			
Description: WELL#10				Matrix: Aqueous			
Date Sampled: 10/07/2014 1155							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	10/08/2014 2030	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	86		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-012			
Description: WELL#20				Matrix: Aqueous			
Date Sampled: 10/07/2014 1407							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/08/2014 1921	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ07035-013			
Description: WELL#32				Matrix: Aqueous			
Date Sampled: 10/07/2014 1437							
Date Received: 10/07/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	90	10/08/2014 2031	MJI		57799

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	160		1.8	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06088

Client: Westinghouse Elec Co		Report to Contact: Cynthia London		Sampler (Printed Name): R. Gross		Quote No.	
Address: 8801 Bluff Rd		Telephone No. / Fax No. / Email: 647-3171		Waybill No.		Page of	
City: Hopkins		State: SC		Zip Code: 29001		Number of Containers	
Project Name:		Preservative:		1. Unpres. 4. HNO3 7. NaOH		Bottle (See Instructions on back)	
		2. NaOH/ZnA 5. HCL		3. H2SO4 6. Na Thio.		Preservative	
Project Number		P.O. Number		Matrix		Barcode: PJ07035	
Sample ID / Description (Containers for each sample may be conducted on one line)		Date		Time		Analysis	
Well #38		10/7/14		0847		Nitrates	
Well #38 duplicate		10/7/14		0847		Ground Water	
Well #29		10/7/14		0911			
Well #30		10/7/14		0931			
Well #22		10/7/14		0954			
Well #8		10/7/14		1012			
Well #28		10/7/14		1042			
Well #13a		10/7/14		1110			
Well #13a duplicate		10/7/14		1110			
Well #7		10/7/14		1133			
Turn Around Time Required (Prior lab approval required for expedited TAT)		Standard		Rush (P/each Specify)		Possible Hazard Identification	
1. Relinquished by / Sampler		Date: 10/7/14		Time: 1515		Hazard: <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
2. Relinquished by		Date: 10/7/14		Time: 1540		1. Received by: [Signature]	
3. Relinquished by		Date:		Time:		2. Received by:	
4. Relinquished by		Date:		Time:		3. Received by:	
		Date:		Time:		4. Laboratory Received by:	
		Date:		Time:		LAB USE ONLY	
		Date:		Time:		Received on lot (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Receipt Temp: 11.9 °C Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

**Shealy Environmental Services, Inc.**  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9701

Number 06089

Level 1 Report v2.1



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-A2-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam 10/27/14 Lot #: 9207035

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>MS 119</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>0.4</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed? 5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: <u>mam</u> Date: <u>10/27/14</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: PJ08037  
Date Completed: 10/15/2014



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* PJ08037 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: PJ08037

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: PJ08037

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #3A	Aqueous	10/08/2014 0942	10/08/2014
002	WELL #3A DUPLICATE	Aqueous	10/08/2014 0942	10/08/2014
003	WELL #47	Aqueous	10/08/2014 1025	10/08/2014
004	WELL #17	Aqueous	10/08/2014 1150	10/08/2014
005	WELL #39	Aqueous	10/08/2014 1407	10/08/2014
006	WELL #43	Aqueous	10/08/2014 1430	10/08/2014

(6 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: PJ08037

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	WELL #47	Aqueous	Nitrate - N	353.2	27		mg/L	7
004	WELL #17	Aqueous	Nitrate - N	353.2	14		mg/L	8
005	WELL #39	Aqueous	Nitrate - N	353.2	130		mg/L	9
006	WELL #43	Aqueous	Nitrate - N	353.2	5.4		mg/L	10

(4 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-001			
Description: WELL #3A				Matrix: Aqueous			
Date Sampled: 10/08/2014 0942							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/09/2014 1028	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-002			
Description: WELL #3A DUPLICATE				Matrix: Aqueous			
Date Sampled: 10/08/2014 0942							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	10/09/2014 1031	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: PJ08037-003

Description: WELL #47

Matrix: Aqueous

Date Sampled: 10/08/2014 1025

Date Received: 10/08/2014

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	10/09/2014 1103	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	27		0.30	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 7 of 10

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-004			
Description: WELL #17				Matrix: Aqueous			
Date Sampled: 10/08/2014 1150							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	10/09/2014 1104	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	14		0.20	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company			Laboratory ID: PJ08037-005		
Description: WELL #39			Matrix: Aqueous		
Date Sampled: 10/08/2014 1407					
Date Received: 10/08/2014					

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	10/09/2014 1132	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	130		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: PJ08037-006			
Description: WELL #43				Matrix: Aqueous			
Date Sampled: 10/08/2014 1430							
Date Received: 10/08/2014							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	10/09/2014 1106	MJI		57913

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.4		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

Shealy Environmental Services, Inc.  
106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
www.shealylab.com

Number 06091

Client: <u>Westinghouse Elec Co</u>		Report to Contact: <u>Cynthia Cogsdon</u>		Sampler (Printed Name): <u>R. Grews</u>		Quote No.
Address: <u>8201 Bluff Rd</u>		Telephone No. / Fax No. / Email: <u>647-3171</u>		Waybill No.		Page <u>1</u> of <u>1</u>
City: <u>Hopkins</u>		State: <u>SC</u>		Zip Code: <u>29001</u>		Number of Containers: <u>1</u>
Project Name: <u>Preservative</u>		1. Urines, 4. HNO3, 7. NaOH		2. MeOH/ZnA, 5. HCL		Bottle (See instructions on back): <u>1</u>
3. H2SO4, 6. Na Thio.		Preservative		Barcode: <u>PJ08037</u>		Preservative
Project Number	P.O. Number	Sample ID / Description (Containers for each sample may be contained on one line)	Date	Time	Matrix	Analysis
		Well #3A	10/8/14	0940	G	Groundwater
		Well #3A duplicate	10/8/14	0942	G	
		Well #47	10/8/14	1025	G	
		Well #17	10/8/14	1150	G	
		Well #39	10/8/14	1407	G	
		Well #43	10/8/14	1430	G	
Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Possible Hazard Identification
<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Flush (Please Specify) <input type="checkbox"/> Push (Please Specify)		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		1. Received by <u>R. Grews</u> Date <u>10/8/14</u> Time <u>1520</u> 2. Received by <u>R. Grews</u> Date <u>10/8/14</u> Time <u>1550</u> 3. Received by <u>R. Grews</u> Date <u>10/8/14</u> Time <u>1550</u> 4. Laboratory Received by <u>R. Grews</u> Date <u>10/8/14</u> Time <u>1550</u>		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Corrosive <input type="checkbox"/> Unknown
1. Relinquished by / Sampler <u>R. Grews</u> 2. Relinquished by <u>R. Grews</u> 3. Relinquished by <u>R. Grews</u> 4. Relinquished by <u>R. Grews</u>		Note: All samples are retained for six weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on this Check: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Receipt Temp. <u>15.2</u> °C		Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 15

Page 1 of 1  
Replaces Date: 03/07/14  
Effective Date: 07/15/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam/100214 Lot #: PJ08037

Means of receipt: <input checked="" type="checkbox"/> SESI			<input type="checkbox"/> Client	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> Airborne Exp	<input type="checkbox"/> Other
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		1. Were custody seals present on the cooler?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?				
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.7/15.8</u> °C / °C / °C / °C							
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #3 IR Gun Correction Factor: <u>0.1</u> °C							
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None							
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Were sample IDs listed on all sample containers?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Was collection date & time listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Was collection date & time listed on all sample containers?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Were tests to be performed listed on the COC?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Did all samples arrive in the proper containers for each test?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Did all containers arrive in good condition (unbroken, lids on, etc.)?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		14. Was adequate sample volume available?				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		16. Were any samples containers missing?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		17. Were there any excess samples not listed on COC?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pca-size" (¼" or 6mm in diameter) in any VOA vials?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?				
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		24. Was the quote number used taken from the container label?				
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)							
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.							
Sample(s) _____ were received with bubbles >6 mm in diameter.							
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)							
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____							
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____							
Sample labels applied by: <u>mam</u> Verified by: <u>mam</u> Date: <u>10/2/14</u>							

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA12016  
Date Completed: 01/20/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA12016 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA12016

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

---

Sample Summary  
Westinghouse Electric Company  
Lot Number: QA12016

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #RW2	Aqueous	01/12/2015 1034	01/12/2015
002	Well #41R	Aqueous	01/12/2015 1052	01/12/2015
003	Well #26	Aqueous	01/12/2015 1012	01/12/2015
004	Well #48	Aqueous	01/12/2015 0945	01/12/2015
(4 samples)				

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QA12016

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #RW2	Aqueous	Nitrate - N	353.2	30		mg/L	5
002	Well #41R	Aqueous	Nitrate - N	353.2	56		mg/L	6
003	Well #26	Aqueous	Nitrate - N	353.2	2.9		mg/L	7
004	Well #48	Aqueous	Nitrate - N	353.2	2.3		mg/L	8
(4 detections)								

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-001			
Description: Well #RW2				Matrix: Aqueous			
Date Sampled: 01/12/2015 1034							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/12/2015 1445	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-002			
Description: Well #41R				Matrix: Aqueous			
Date Sampled: 01/12/2015 1052							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/12/2015 1446	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	56		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-003			
Description: Well #26				Matrix: Aqueous			
Date Sampled: 01/12/2015 1012							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/12/2015 1449	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA12016-004			
Description: Well #48				Matrix: Aqueous			
Date Sampled: 01/12/2015 0945							
Date Received: 01/12/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/12/2015 1450	MJI		65129

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.3		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

### ***Chain of Custody Record***

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 41863

Client <b>Westinghouse Elec Co</b>		Report to Contact <b>CYNTHIA LOUGHS</b>		Telephone No. / E-mail <b>647-3171</b>		Quote No.	
Address <b>5801 Bluec Rd</b>		Sample's Signature <i>[Signature]</i>		Analysis: (Attach list if more space is needed)			
City <b>Hopkins</b>	State <b>SC</b>	Zip Code <b>29061</b>	Printed Name <b>Randy E. Cuzcoso</b>		Page _____ of _____		
Project Name		Project No.		Barcode <b>QA12016</b>		Remarks / Cooler I.D.	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date	Time	No. of Containers by Preservative Type			
				Aqueous	Mixtur	PCB	Pesticides
				Solid	Liquor	PCB	Pesticides
				Solid	Liquor	PCB	Pesticides
<b>WZ11 # TRW2</b>	<b>11/2/15</b>	<b>1024</b>	<b>6</b>				
<b>WZ11 # 41R</b>	<b>11/2/15</b>	<b>1052</b>	<b>6</b>				
<b>WZ11 # 24</b>	<b>11/2/15</b>	<b>1012</b>	<b>6</b>				
<b>WZ11 # 418</b>	<b>11/2/15</b>	<b>0945</b>	<b>6</b>				
<i>[Large handwritten signature across the table]</i>							
Turn Around Time Required (Prior info approval required for expedited TAT.) Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Recycle by Lab <input type="checkbox"/>		Possible Hazard Identification <input checked="" type="checkbox"/> Biohazard <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		QC Requirements (Specify)	
1. Analyzed by <b>12/15/15</b>		Date <b>11/2/15</b>		Time <b>1100</b>		Date <b>1-12-15</b>	
2. Reanalyzed by <b>Kayla A. Adair</b>		Date <b>1-12-15</b>		Time <b>1155</b>		Date <b>1-12-15</b>	
3. Reanalyzed by		Date		Time		Date	
4. Reanalyzed by		Date		Time		Date	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on (Date) <b>1-12-15</b>		Received From <b>20</b>	

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Clinic Copy**

Document Number: F-AO-133 Effective Date: 09-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP / 1-12-15 Lot #: QA1200

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>10.1 / 2.0</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>-0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pca-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>1-12-15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA19014  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA19014 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA19014

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA19014

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #38	Aqueous	01/19/2015 0903	01/19/2015
002	WELL #29	Aqueous	01/19/2015 0933	01/19/2015
003	WELL #30	Aqueous	01/19/2015 0953	01/19/2015
004	WELL #22	Aqueous	01/19/2015 1016	01/19/2015
005	WELL #18	Aqueous	01/19/2015 1038	01/19/2015
006	WELL #28	Aqueous	01/19/2015 1114	01/19/2015
007	WELL #13R	Aqueous	01/19/2015 1139	01/19/2015
008	WELL #7	Aqueous	01/19/2015 1356	01/19/2015
009	WELL #10	Aqueous	01/19/2015 1415	01/19/2015
010	WELL #32	Aqueous	01/19/2015 1438	01/19/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA19014

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #38	Aqueous	Nitrate - N	353.2	11		mg/L	5
002	WELL #29	Aqueous	Nitrate - N	353.2	66		mg/L	6
003	WELL #30	Aqueous	Nitrate - N	353.2	78		mg/L	7
004	WELL #22	Aqueous	Nitrate - N	353.2	64		mg/L	8
005	WELL #18	Aqueous	Nitrate - N	353.2	670		mg/L	9
006	WELL #28	Aqueous	Nitrate - N	353.2	1.4		mg/L	10
007	WELL #13R	Aqueous	Nitrate - N	353.2	30		mg/L	11
008	WELL #7	Aqueous	Nitrate - N	353.2	240		mg/L	12
009	WELL #10	Aqueous	Nitrate - N	353.2	75		mg/L	13
010	WELL #32	Aqueous	Nitrate - N	353.2	150		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-001			
Description: WELL #38				Matrix: Aqueous			
Date Sampled: 01/19/2015 0903							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	01/20/2015 1704	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	11		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-002			
Description: WELL #29				Matrix: Aqueous			
Date Sampled: 01/19/2015 0933							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1724	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	66		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-003			
Description: WELL #30				Matrix: Aqueous			
Date Sampled: 01/19/2015 0953							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1725	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	78		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-004			
Description: WELL #22				Matrix: Aqueous			
Date Sampled: 01/19/2015 1016							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1726	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	64		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-005			
Description: WELL #18				Matrix: Aqueous			
Date Sampled: 01/19/2015 1038							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	600	01/20/2015 1739	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	670		12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-006			
Description: WELL #28				Matrix: Aqueous			
Date Sampled: 01/19/2015 1114							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/20/2015 1712	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	1.4		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-007			
Description: WELL #13R				Matrix: Aqueous			
Date Sampled: 01/19/2015 1139							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/20/2015 1728	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-008			
Description: WELL #7				Matrix: Aqueous			
Date Sampled: 01/19/2015 1356							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	01/20/2015 1740	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	240		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-009			
Description: WELL #10				Matrix: Aqueous			
Date Sampled: 01/19/2015 1415							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	01/20/2015 1736	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	75		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA19014-010			
Description: WELL #32				Matrix: Aqueous			
Date Sampled: 01/19/2015 1438							
Date Received: 01/19/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	90	01/20/2015 1737	MJI		65739

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	150		1.8	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 45106

Client: Westinhouse Ele Co		Report to Contact: Cynthia Lucas		Telephone No. / E-mail: 647-3171		Quote No. 1552	
Address: 5301 Bluff Rd		Sample's Signature: Randy E. Causse		Analysis (Attach list if more space is needed)		Page 1 of 1	
City: Hopkins		Printed Name: Randy E. Causse		Barcode: QA19014		Remarks / Cooler I.D. Groundwater	
State: SC		Zip Code: 29001		Matrix: As Specified		No. of Containers by Preservative Type	
Project No.		P.O. No.		Date		Time	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Time	
W211 #38		11/19/15		0903		G	
W211 #29		11/19/15		0933		G	
W211 #30		11/19/15		0953		G	
W211 #22		11/19/15		1016		G	
W211 #18		11/19/15		1038		G	
W211 #28		11/19/15		1114		G	
W211 #13e		11/19/15		1139		G	
W211 #7		11/19/15		1356		G	
W211 #10		11/19/15		1415		G	
W211 #32		11/19/15		1438		G	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Reference: Rush (Specify)		Return to Client		Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin-Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>		Date: 11/19/15 Time: 1515	
Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		1. Received by: [Signature]		Date: 11/19/15 Time: 1515	
2. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		2. Received by: [Signature]		Date: 11/19/15 Time: 1515	
3. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		3. Received by: [Signature]		Date: 11/19/15 Time: 1515	
4. Relinquished by: [Signature]		Date: 11/19/15 Time: 1515		4. Laboratory received by: [Signature]		Date: 11/19/15 Time: 1515	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on ice (Circle) Yes (X) No		Recept Temp. 9.3 °C	

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 06-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam/01/19/15 Lot #: 0A19017

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>19.2/19.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>1/19/15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QA20061  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA20061 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA20061

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary Westinghouse Electric Company Lot Number: QA20061

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #24	Aqueous	01/20/2015 0845	01/20/2015
002	Well #17	Aqueous	01/20/2015 0920	01/20/2015
003	Well #39	Aqueous	01/20/2015 0944	01/20/2015
004	Well #43	Aqueous	01/20/2015 1007	01/20/2015
005	Well #33	Aqueous	01/20/2015 1026	01/20/2015
006	Well #44	Aqueous	01/20/2015 1054	01/20/2015
007	Well #15	Aqueous	01/20/2015 1114	01/20/2015
008	Well #16	Aqueous	01/20/2015 1133	01/20/2015
009	Well #23R	Aqueous	01/20/2015 1403	01/20/2015
010	Well #14	Aqueous	01/20/2015 1427	01/20/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QA20061

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #24	Aqueous	Nitrate - N	353.2	0.058		mg/L	5
002	Well #17	Aqueous	Nitrate - N	353.2	13		mg/L	6
003	Well #39	Aqueous	Nitrate - N	353.2	120		mg/L	7
004	Well #43	Aqueous	Nitrate - N	353.2	6.4		mg/L	8
005	Well #33	Aqueous	Nitrate - N	353.2	7.9		mg/L	9
006	Well #44	Aqueous	Nitrate - N	353.2	4.5		mg/L	10
007	Well #15	Aqueous	Nitrate - N	353.2	12		mg/L	11
008	Well #16	Aqueous	Nitrate - N	353.2	2.7		mg/L	12
009	Well #23R	Aqueous	Nitrate - N	353.2	0.31		mg/L	13
010	Well #14	Aqueous	Nitrate - N	353.2	3.3		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-001			
Description: Well #24				Matrix: Aqueous			
Date Sampled: 01/20/2015 0845							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1153	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.058		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-002			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 01/20/2015 0920							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	01/21/2015 1230	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	13		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-003			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 01/20/2015 0944							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	75	01/21/2015 1245	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	120		1.5	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-004			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 01/20/2015 1007							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	01/21/2015 1238	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.4		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-005			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 01/20/2015 1026							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	01/21/2015 1239	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.9		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-006			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 01/20/2015 1054							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	01/21/2015 1240	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	4.5		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-007			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 01/20/2015 1114							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	01/21/2015 1246	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA20061-008

Description: Well #16

Matrix: Aqueous

Date Sampled: 01/20/2015 1133

Date Received: 01/20/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	01/21/2015 1242	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

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Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-009			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 01/20/2015 1403							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1207	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.31		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA20061-010			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 01/20/2015 1427							
Date Received: 01/20/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	01/21/2015 1243	MJI		65805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.3		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 45107

Client: Westinhouse E&E Co		Report to Contact: Cynthia Longsdon		Telephone No. / E-mail: 647-317		Quote No. <del>45107</del>	
Address: 5801 Bluff Rd		Sampler's Signature: Randy E. Crews		Analysis (Attach list if more space is needed)		Page 1 of 1	
City: Hopkins		Printed Name: Randy E. Crews Sr.		Barcode: QA20061			
State: SC		Zip Code: 29301					
Project Name:		Project No.:					
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix	No. of Containers by Preservative Type	Remarks / Cooler I.D.		
Well #24	11/20/15	0845	Aqueous	1	Ground water		
Well #17	11/20/15	0920	Aqueous	1			
Well #39	11/20/15	0944	Aqueous	1			
Well #43	11/20/15	1007	Aqueous	1			
Well #33	11/20/15	1026	Aqueous	1			
Well #44	11/20/15	1054	Aqueous	1			
Well #15	11/20/15	1114	Aqueous	1			
Well #16	11/20/15	1133	Aqueous	1			
Well #232	11/20/15	1403	Aqueous	1			
Well #14	11/20/15	1427	Aqueous	1			
Turn Around Time Required (Prior lab approval required for expedited TAT.)			Sample Disposal			OC Requirements (Specify)	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)			<input checked="" type="checkbox"/> Return to Client <input type="checkbox"/> Recycle by Lab			<input type="checkbox"/> High-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by: <u>R. Crews</u>			Date: 11/20/15 Time: 1515			1. Received by: <u>C. Longsdon</u>	
2. Relinquished by: <u>C. Longsdon</u>			Date: 11/20/15 Time: 1657			2. Received by:	
3. Relinquished by:			Date:			3. Received by:	
4. Relinquished by:			Date:			4. Laboratory received by: <u>John T...</u>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			LAB USE ONLY			Recsplot Temp. 5.7 °C	
			Received on (Date)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/>	

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AQ-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: CMT / 1/20/15 Lot #: DA20001

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.8 / 5.7</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>-0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CMT</u> Verified by: _____ Date: <u>1/20/15</u>		

Comments:

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Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Lot Number: QA21024  
Date Completed: 01/26/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QA21024 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QA21024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QA21024

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #47	Aqueous	01/21/2015 0943	01/21/2015
002	WELL #20	Aqueous	01/21/2015 1040	01/21/2015
003	WELL #27	Aqueous	01/21/2015 1105	01/21/2015
004	WELL #34	Aqueous	01/21/2015 1136	01/21/2015

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QA21024

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #47	Aqueous	Nitrate - N	353.2	34		mg/L	5
002	WELL #20	Aqueous	Nitrate - N	353.2	0.058		mg/L	6

(2 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QA21024-001

Description: WELL #47

Matrix: Aqueous

Date Sampled: 01/21/2015 0943

Date Received: 01/21/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	01/21/2015 1720	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	34		0.60	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Level 1 Report v2.1



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-002			
Description: WELL #20				Matrix: Aqueous			
Date Sampled: 01/21/2015 1040							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1703	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.058		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-003			
Description: WELL #27				Matrix: Aqueous			
Date Sampled: 01/21/2015 1105							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1704	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QA21024-004			
Description: WELL #34				Matrix: Aqueous			
Date Sampled: 01/21/2015 1136							
Date Received: 01/21/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	01/21/2015 1705	MJI		65849

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
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Number 41864

[illegible]

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy**

Document Number: F.A.D-133 Effective Date: 09-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mam/01/15 Lot #: QA21024

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>10.3</u> <u>10.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0.1</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>1/21/15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD09063  
Date Completed: 04/15/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD09063 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QD09063

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QD09063

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #RW2	Aqueous	04/09/2015 0946	04/09/2015
002	WELL #41R	Aqueous	04/09/2015 1009	04/09/2015
003	WELL #R6	Aqueous	04/09/2015 1057	04/09/2015
004	WELL #48	Aqueous	04/09/2015 1035	04/09/2015

(4 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QD09063

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #RW2	Aqueous	Nitrate - N	353.2	19		mg/L	5
002	WELL #41R	Aqueous	Nitrate - N	353.2	51		mg/L	6
003	WELL #R6	Aqueous	Nitrate - N	353.2	2.9		mg/L	7
004	WELL #48	Aqueous	Nitrate - N	353.2	3.2		mg/L	8

(4 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company

Laboratory ID: QD09063-001

Description: WELL #RW2

Matrix: Aqueous

Date Sampled: 04/09/2015 0946

Date Received: 04/09/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/10/2015 1752	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	19		0.30	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 5 of 8

Level 1 Report v2.1

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-002			
Description: WELL #41R				Matrix: Aqueous			
Date Sampled: 04/09/2015 1009							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/10/2015 1820	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	51		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-003			
Description: WELL #R6				Matrix: Aqueous			
Date Sampled: 04/09/2015 1057							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/10/2015 1801	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.9		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD09063-004			
Description: WELL #48				Matrix: Aqueous			
Date Sampled: 04/09/2015 1035							
Date Received: 04/09/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/10/2015 1802	MJI		72325

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.2		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
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Number 45108

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**DISTRIBUTION:** WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KMP/4-9-15 Lot #: QD09063

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>120</u> / <u>120</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles <input type="checkbox"/> IR Gun ID: #4 <input type="checkbox"/> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/H&M/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KMP</u> Verified by: _____ Date: <u>4-9-15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD13033  
Date Completed: 04/19/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD13033 \*



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QD13033

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QD13033

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #38	Aqueous	04/13/2015 0857	04/13/2015
002	WELL #29	Aqueous	04/13/2015 0919	04/13/2015
003	WELL #30	Aqueous	04/13/2015 0938	04/13/2015
004	WELL #22	Aqueous	04/13/2015 0958	04/13/2015
005	WELL #18	Aqueous	04/13/2015 1017	04/13/2015
006	WELL #28	Aqueous	04/13/2015 1040	04/13/2015
007	WELL #13R	Aqueous	04/13/2015 1108	04/13/2015
008	WELL #7	Aqueous	04/13/2015 1128	04/13/2015
009	WELL #10	Aqueous	04/13/2015 1143	04/13/2015
010	WELL #32	Aqueous	04/13/2015 1203	04/13/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QD13033

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #38	Aqueous	Nitrate - N	353.2	11		mg/L	5
002	WELL #29	Aqueous	Nitrate - N	353.2	64		mg/L	6
003	WELL #30	Aqueous	Nitrate - N	353.2	42		mg/L	7
004	WELL #22	Aqueous	Nitrate - N	353.2	150		mg/L	8
005	WELL #18	Aqueous	Nitrate - N	353.2	720		mg/L	9
006	WELL #28	Aqueous	Nitrate - N	353.2	5.1		mg/L	10
007	WELL #13R	Aqueous	Nitrate - N	353.2	33		mg/L	11
008	WELL #7	Aqueous	Nitrate - N	353.2	300		mg/L	12
009	WELL #10	Aqueous	Nitrate - N	353.2	66		mg/L	13
010	WELL #32	Aqueous	Nitrate - N	353.2	160		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-001			
Description: WELL #38				Matrix: Aqueous			
Date Sampled: 04/13/2015 0857							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	04/14/2015 1220	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	11		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-002			
Description: WELL #29				Matrix: Aqueous			
Date Sampled: 04/13/2015 0919							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/14/2015 1221	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	64		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-003			
Description: WELL #30				Matrix: Aqueous			
Date Sampled: 04/13/2015 0938							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/14/2015 1222	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	42		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-004			
Description: WELL #22				Matrix: Aqueous			
Date Sampled: 04/13/2015 0958							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	04/14/2015 1240	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	150		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-005			
Description: WELL #18				Matrix: Aqueous			
Date Sampled: 04/13/2015 1017							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	500	04/14/2015 1247	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	720		10	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-006			
Description: WELL #28				Matrix: Aqueous			
Date Sampled: 04/13/2015 1040							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	04/14/2015 1225	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.1		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-007			
Description: WELL #13R				Matrix: Aqueous			
Date Sampled: 04/13/2015 1108							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/14/2015 1242	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	33		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-008			
Description: WELL #7				Matrix: Aqueous			
Date Sampled: 04/13/2015 1128							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	04/14/2015 1243	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	300		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-009			
Description: WELL #10				Matrix: Aqueous			
Date Sampled: 04/13/2015 1143							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	60	04/14/2015 1244	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	66		1.2	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD13033-010			
Description: WELL #32				Matrix: Aqueous			
Date Sampled: 04/13/2015 1203							
Date Received: 04/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	100	04/14/2015 1245	MJI		72460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	160		2.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
www.shealylab.com

# Chain of Custody Record

**Number 43469**

Client: <u>Westinhouse Ele Co</u>		Telephone No. / E-mail: <u>647-3171</u>		Quote No.
Address: <u>5807 Bluff Rd</u>		Analysis (Attach list if more space is needed)		
City: <u>Hopkins</u>	State: <u>SC</u>	Zip Code: <u>29001</u>	Page <u>1</u> of <u>1</u>	
Project Name: <u>Hopkins</u>		Barcode:		
Project No.:		Remarks / Cooler I.D.: <u>Groundwater</u>		
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time
Well #38		4/13/15	0857	
Well #29		4/13/15	0919	
Well #30		4/13/15	0938	
Well #22		4/13/15	0958	
Well #18		4/13/15	1017	
Well #28		4/13/15	1040	
Well #13a		4/13/15	1108	
Well #7		4/13/15	1128	
Well #10		4/13/15	1143	
Well #33		4/13/15	1203	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		
Standard <input type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		
Relinquished by: <u>[Signature]</u>		Received by: <u>[Signature]</u>		
2. Relinquished by: <u>[Signature]</u>		2. Received by: <u>[Signature]</u>		
3. Relinquished by:		3. Received by:		
4. Relinquished by:		4. Laboratory received by: <u>[Signature]</u>		
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on ice (Circle) <input checked="" type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/>		
		Receipt Temp: <u>5.0</u> °C		

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy**

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: man/04/31/15 Lot #: 6013033

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.0/5.0</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: #4 IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pca-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>man</u> Verified by: _____ Date: <u>4/31/15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD16029  
Date Completed: 04/19/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD16029 \*



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

---

Sample Summary  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #3A	Aqueous	04/16/2015 0918	04/16/2015
002	Well #27	Aqueous	04/16/2015 0940	04/16/2015
003	Well #20	Aqueous	04/16/2015 1005	04/16/2015
004	Well #24	Aqueous	04/16/2015 1029	04/16/2015
005	Well #47	Aqueous	04/16/2015 1126	04/16/2015
006	Well #44	Aqueous	04/16/2015 1145	04/16/2015
007	Well #33	Aqueous	04/16/2015 1158	04/16/2015

(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD16029  
Project Name: Nitrate  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	Well #20	Aqueous	Nitrate - N	353.2	0.051		mg/L	7
004	Well #24	Aqueous	Nitrate - N	353.2	0.054		mg/L	8
005	Well #47	Aqueous	Nitrate - N	353.2	31		mg/L	9
006	Well #44	Aqueous	Nitrate - N	353.2	3.7		mg/L	10
007	Well #33	Aqueous	Nitrate - N	353.2	6.9		mg/L	11

(5 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-001			
Description: Well #3A				Matrix: Aqueous			
Date Sampled: 04/16/2015 0918				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1750	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-002			
Description: Well #27				Matrix: Aqueous			
Date Sampled: 04/16/2015 0940				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1753	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-003			
Description: Well #20				Matrix: Aqueous			
Date Sampled: 04/16/2015 1005				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1754	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.051		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-004			
Description: Well #24				Matrix: Aqueous			
Date Sampled: 04/16/2015 1029				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/16/2015 1801	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.054		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-005			
Description: Well #47				Matrix: Aqueous			
Date Sampled: 04/16/2015 1126				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	04/16/2015 1857	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	31		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-006			
Description: Well #44				Matrix: Aqueous			
Date Sampled: 04/16/2015 1145				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	04/16/2015 1837	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.7		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD16029-007			
Description: Well #33				Matrix: Aqueous			
Date Sampled: 04/16/2015 1158				Project Name: Nitrate			
Date Received: 04/16/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	04/16/2015 1838	MJI		72710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.9		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 43470**

Client: <u>Westinhouse Ele Co</u>		Report to Contact: <u>Cynthia Coats</u>		Telephone No. / Email: <u>647-371</u>		Quote No.:	
Address: <u>5801 Bluff Rd</u>		Signature: <u>[Signature]</u>		Analyse (Attach list if more space is needed)			
City: <u>Hopkins</u> State: <u>SC</u> Zip Code: <u>29061</u>		Printed Name: <u>Randy Coats</u>					
Project Name:		P.O. No.:		Barcode:		QD16029	
Project No.:		Date:		Matrix:		No. of Containers by Preservative Type	
Sample ID / Description (Containers for each sample may be combined on one line.)		Time		Analysis		Preservative Type	
Well #3A		4/16/15 0918		6		1	
Well #27		4/16/15 0940		6		1	
Well #20		4/16/15 1005		6		1	
Well #24		4/16/15 1029		6		1	
Well #47		4/16/15 1126		6		1	
Well #44		4/16/15 1145		6		1	
Well #33		4/16/15 1158		6		1	
Remarks / Cooler I.D.:		Grandwater					

Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input checked="" type="checkbox"/> Rush (Specify)		Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input checked="" type="checkbox"/>		Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>			
1. Requested by: <u>R. Coats</u>		Date: <u>4/16/15</u> Time: <u>1515</u>		1. Received by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1515</u>	
2. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		2. Received by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>	
3. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		3. Received by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>	
4. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>		4. Requested by: <u>[Signature]</u>		Date: <u>4/16/15</u> Time: <u>1535</u>	

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on (Date) (Circle) Yes No  
 Receipt Temp. 1-2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KWP 11-16-15 Lot #: QD16029

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.2 / 11.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>4-16-15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QD17040  
Date Completed: 05/01/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* QD17040 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #17	Aqueous	04/17/2015 0918	04/17/2015
002	Well #39	Aqueous	04/17/2015 0937	04/17/2015
003	Well #43	Aqueous	04/17/2015 0953	04/17/2015
004	Well #15	Aqueous	04/17/2015 1017	04/17/2015
005	Well #23R	Aqueous	04/17/2015 1034	04/17/2015
006	Well #14	Aqueous	04/17/2015 1056	04/17/2015
007	Well #16	Aqueous	04/17/2015 1110	04/17/2015

(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Executive Summary  
Westinghouse Electric Company  
Lot Number: QD17040  
Project Name: Nitrate  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #17	Aqueous	Nitrate - N	353.2	17		mg/L	5
002	Well #39	Aqueous	Nitrate - N	353.2	94		mg/L	6
003	Well #43	Aqueous	Nitrate - N	353.2	7.0		mg/L	7
004	Well #15	Aqueous	Nitrate - N	353.2	26		mg/L	8
005	Well #23R	Aqueous	Nitrate - N	353.2	0.55		mg/L	9
006	Well #14	Aqueous	Nitrate - N	353.2	2.4		mg/L	10
007	Well #16	Aqueous	Nitrate - N	353.2	2.7		mg/L	11

(7 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-001			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 04/17/2015 0918				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/17/2015 1901	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N			353.2	17	0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-002			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 04/17/2015 0937				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	50	04/17/2015 1900	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	94		1.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-003			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 04/17/2015 0953				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	15	04/17/2015 1902	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.0		0.30	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-004			
Description: Well #15				Matrix: Aqueous			
Date Sampled: 04/17/2015 1017				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	20	04/17/2015 1906	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	26		0.40	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-005			
Description: Well #23R				Matrix: Aqueous			
Date Sampled: 04/17/2015 1034				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	04/17/2015 1847	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.55		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-006			
Description: Well #14				Matrix: Aqueous			
Date Sampled: 04/17/2015 1056				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/17/2015 1903	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.4		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QD17040-007			
Description: Well #16				Matrix: Aqueous			
Date Sampled: 04/17/2015 1110				Project Name: Nitrate			
Date Received: 04/17/2015				Project Number:			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	04/17/2015 1905	MJI		72822

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 43471

Client: Westinhausz Elz Co		Report to Contact: Cynthia Cogsdon		Telephone No. / E-mail: 647-3171		Quote No.	
Address: 501 Bluff Rd		Sampler's Signature: [Signature]		Analysis (Attach list if more space is needed)		Page 1 of 1	
City: Hopkinds		Printed Name: Randy Carius		Project Name: [Blank]		Project No. QD17040	
State: SC		Zip Code: 29061		Remarks / Cooler I.D.: Groundwater			

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	No. of Containers by Preservative Type				Matrix	G-Grab	Acceptor	Analysis	Preservation Type	Remarks / Cooler I.D.
			Ascorbic Acid	Ascorbic Acid	Ascorbic Acid	Ascorbic Acid						
W211 #17	4/17/15	0918	6	1	1	1	1	1	1	1	1	Groundwater
W211 #39	4/17/15	0937	6	1	1	1	1	1	1	1	1	
W211 #43	4/17/15	0953	6	1	1	1	1	1	1	1	1	
W211 #15	4/17/15	1017	6	1	1	1	1	1	1	1	1	
W211 #23R	4/17/15	1034	6	1	1	1	1	1	1	1	1	
W211 #14	4/17/15	1056	6	1	1	1	1	1	1	1	1	
W211 #16	4/17/15	1110	6	1	1	1	1	1	1	1	1	

Turn Around Time Required (Prior lab approval required for expedited TAT.)	Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
	Return to Client	Dispose by Lab	Non-Hazard	Hazardous	Date	Time
1. Relinquished by: [Signature]	Date: 4/17/15	Time: 1510	<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Hazardous	Date: 4/17/15	Time: 1510
2. Relinquished by: [Signature]	Date: 4/17/15	Time: 1530	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Hazardous	Date:	Time:
3. Relinquished by:	Date:	Time:	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Hazardous	Date:	Time:
4. Relinquished by:	Date:	Time:	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Hazardous	Date: 4/17/15	Time: 1530

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on: (Circle) Yes No  
 Receipt Temp: 29 °C

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Customer Copy

Document Number: FAD-133 Effective Date: 08-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 16

Page 1 of 1  
Replaces Date: 07/15/14  
Effective Date: 11/07/14

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: WUP 11-17-15 Lot #: QD176

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.9</u> <u>12.9</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>#4</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>WUP</u> Verified by: _____ Date: <u>11-17-15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG10039  
Date Completed: 07/13/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG10039

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

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If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QG10039

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #33	Aqueous	07/10/2015 0846	07/10/2015
002	WELL #RW2	Aqueous	07/10/2015 0932	07/10/2015
003	WELL #41R	Aqueous	07/10/2015 0953	07/10/2015
004	WELL #26	Aqueous	07/10/2015 1010	07/10/2015
005	WELL #48	Aqueous	07/10/2015 1050	07/10/2015
006	WELL #24	Aqueous	07/10/2015 1118	07/10/2015
007	WELL #44	Aqueous	07/10/2015 1150	07/10/2015
008	WELL #15	Aqueous	07/10/2015 1212	07/10/2015
009	WELL #23R	Aqueous	07/10/2015 1351	07/10/2015
010	WELL #14	Aqueous	07/10/2015 1422	07/10/2015
011	WELL #16	Aqueous	07/10/2015 1440	07/10/2015

(11 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG10039

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #33	Aqueous	Nitrate - N	353.2	7.5		mg/L	5
002	WELL #RW2	Aqueous	Nitrate - N	353.2	21		mg/L	6
003	WELL #41R	Aqueous	Nitrate - N	353.2	54		mg/L	7
004	WELL #26	Aqueous	Nitrate - N	353.2	2.7		mg/L	8
005	WELL #48	Aqueous	Nitrate - N	353.2	3.4		mg/L	9
006	WELL #24	Aqueous	Nitrate - N	353.2	0.024		mg/L	10
007	WELL #44	Aqueous	Nitrate - N	353.2	2.5		mg/L	11
008	WELL #15	Aqueous	Nitrate - N	353.2	24		mg/L	12
009	WELL #23R	Aqueous	Nitrate - N	353.2	0.50		mg/L	13
010	WELL #14	Aqueous	Nitrate - N	353.2	0.46		mg/L	14
011	WELL #16	Aqueous	Nitrate - N	353.2	2.6		mg/L	15

(11 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-001			
Description: WELL #33				Matrix: Aqueous			
Date Sampled: 07/10/2015 0846							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/11/2015 1147	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	7.5		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-002			
Description: WELL #RW2				Matrix: Aqueous			
Date Sampled: 07/10/2015 0932							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	18	07/11/2015 1204	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	21		0.36	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-003			
Description: WELL #41R				Matrix: Aqueous			
Date Sampled: 07/10/2015 0953							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	07/11/2015 1205	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	54		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-004			
Description: WELL #26				Matrix: Aqueous			
Date Sampled: 07/10/2015 1010							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1151	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.7		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-005			
Description: WELL #48				Matrix: Aqueous			
Date Sampled: 07/10/2015 1050							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	3	07/11/2015 1152	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	3.4		0.060	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-006			
Description: WELL #24				Matrix: Aqueous			
Date Sampled: 07/10/2015 1118							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1132	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.024		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-007			
Description: WELL #44				Matrix: Aqueous			
Date Sampled: 07/10/2015 1150							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1153	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.5		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-008			
Description: WELL #15				Matrix: Aqueous			
Date Sampled: 07/10/2015 1212							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	18	07/11/2015 1206	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	24		0.36	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-009			
Description: WELL #23R				Matrix: Aqueous			
Date Sampled: 07/10/2015 1351							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1135	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.50		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-010			
Description: WELL #14				Matrix: Aqueous			
Date Sampled: 07/10/2015 1422							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/11/2015 1136	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.46		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG10039-011			
Description: WELL #16				Matrix: Aqueous			
Date Sampled: 07/10/2015 1440							
Date Received: 07/10/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/11/2015 1155	ECP		79389

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	2.6		0.040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 40151

Client						Report to Contact						Telephone No. / Email						QC Requirements (Specify)					
W 2stinghouse Elz Co						Cynthia Lawson						647-3171											
Address						Sample's Signature						Analysis (Attach list if more space is needed)											
5801 Bluff Rd						<i>Randy E. Crasson</i>																	
City Hopkins						Printed Name																	
State SC						Zip Code 29061																	
Project Name						Randy E. Crasson																	
Project No.		P.O. No.		Matrix		No. of Containers by Preservation Type		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age			
Sample ID / Description (Containers for each sample may be combined on one line.)		Date	Time	Matrix		No. of Containers by Preservation Type		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age		Approximate Age			
Well #33		7/10/15	0846	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #2W2			0932		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #4F72			0953		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #26			1010		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #48			1050		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #24			1118		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #44			1150		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #15			1212		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #23e			1351		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Well #1H			1422		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Standard		Rush (Specify)		Possible Hazard Identification		Return to Client		Consent by Lab		Skin Irritant		Poison		Unknown		Date		Time			
1. Requiring by		7/10/15		1515		Received by		7/10/15		1515		Received by		7/10/15		1515		Date		Time			
2. Requiring by		7/10/15		1615		Received by		7/10/15		1615		Received by		7/10/15		1615		Date		Time			
3. Requiring by		7/10/15		1615		Received by		7/10/15		1615		Received by		7/10/15		1615		Date		Time			
4. Requiring by		7/10/15		1615		Received by		7/10/15		1615		Received by		7/10/15		1615		Date		Time			
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on file (Circle) Yes No		For Pack		Receipt Temp		8.5 °C		Date		Time		Time		Date		Time			

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s): PINK-Field/Clinic Copy**

Document Number: FAD-133 Effective Date: 08-01-2014



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

Number 40150

Client <u>Westinghouse Elec Co</u>		Report to Contact <u>Cynthia Legsdon</u>		Telephone No. / E-mail <u>649-3171</u>		Quote No.	
Address <u>5801 Bluff Rd</u>		Sample's Signature <u>[Signature]</u>		Analysis (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City <u>Hopkirk</u>		Printed Name <u>Randy E. Crews</u>		Barcode		Remarks / Cooler I.D. <u>Ground Water</u>	
State <u>SC</u>		Zip Code <u>29061</u>		Project No.		Project Name	
Sample ID / Description (Containers for each sample may be combined on one line)		Date		Time		No. of Containers by Preservative Type	
Well #16		7/10/15		1440		1	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		<input type="checkbox"/> Return to Client <input type="checkbox"/> Special by Lab		<input checked="" type="checkbox"/> Bio-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		<input type="checkbox"/> Date <input type="checkbox"/> Time	
1. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1575</u>		1. Received by		Date <u>7/10/15</u> Time <u>1575</u>	
2. Relinquished by <u>[Signature]</u>		Date <u>7/10/15</u> Time <u>1545</u>		2. Received by		Date <u>7/10/15</u> Time <u>1545</u>	
3. Relinquished by		Date		3. Received by		Date	
4. Relinquished by		Date		4. Relinquished by		Date	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on ice (Circle) (Yes) <u>(Yes)</u> No Ice Pack		Receipt Temp. <u>2.5 °C</u>	

DISTRIBUTION: WHITE &amp; YELLOW-Return to laboratory with Sample(s); PINK-Field/Cient Copy

Document Number: FAD-133 Effective Date: 08-01-2014



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: mem 7/10/15 Lot #: QC10039

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>mem 7/10/15</u> <u>8.525°C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0.0°C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mem</u> Verified by: _____ Date: <u>7/10/15</u>		

Comments:

Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG13032  
Date Completed: 07/16/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG13032

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary Westinghouse Electric Company Lot Number: QG13032

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #38	Aqueous	07/13/2015 0845	07/13/2015
002	Well #29	Aqueous	07/13/2015 0909	07/13/2015
003	Well #30	Aqueous	07/13/2015 0930	07/13/2015
004	Well #22	Aqueous	07/13/2015 0951	07/13/2015
005	Well #18	Aqueous	07/13/2015 1010	07/13/2015
006	Well #28	Aqueous	07/13/2015 1038	07/13/2015
007	Well #13R	Aqueous	07/13/2015 1105	07/13/2015
008	Well #7	Aqueous	07/13/2015 1132	07/13/2015
009	Well #10	Aqueous	07/13/2015 1405	07/13/2015
010	Well #32	Aqueous	07/13/2015 1425	07/13/2015

(10 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary Westinghouse Electric Company Lot Number: QG13032

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #38	Aqueous	Nitrate - N	353.2	9.9		mg/L	5
002	Well #29	Aqueous	Nitrate - N	353.2	58		mg/L	6
003	Well #30	Aqueous	Nitrate - N	353.2	69		mg/L	7
004	Well #22	Aqueous	Nitrate - N	353.2	170		mg/L	8
005	Well #18	Aqueous	Nitrate - N	353.2	740		mg/L	9
006	Well #28	Aqueous	Nitrate - N	353.2	5.2		mg/L	10
007	Well #13R	Aqueous	Nitrate - N	353.2	30		mg/L	11
008	Well #7	Aqueous	Nitrate - N	353.2	320		mg/L	12
009	Well #10	Aqueous	Nitrate - N	353.2	85		mg/L	13
010	Well #32	Aqueous	Nitrate - N	353.2	190		mg/L	14

(10 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-001			
Description: Well #38				Matrix: Aqueous			
Date Sampled: 07/13/2015 0845							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	11	07/14/2015 1236	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	9.9		0.22	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-002			
Description: Well #29				Matrix: Aqueous			
Date Sampled: 07/13/2015 0909							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/14/2015 1255	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	58		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-003			
Description: Well #30				Matrix: Aqueous			
Date Sampled: 07/13/2015 0930							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	40	07/14/2015 1301	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	69		0.80	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-004			
Description: Well #22				Matrix: Aqueous			
Date Sampled: 07/13/2015 0951							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1302	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	170		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-005			
Description: Well #18				Matrix: Aqueous			
Date Sampled: 07/13/2015 1010							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	400	07/14/2015 1309	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	740		8.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-006			
Description: Well #28				Matrix: Aqueous			
Date Sampled: 07/13/2015 1038							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/14/2015 1247	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	5.2		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-007			
Description: Well #13R				Matrix: Aqueous			
Date Sampled: 07/13/2015 1105							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/14/2015 1305	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	30		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-008			
Description: Well #7				Matrix: Aqueous			
Date Sampled: 07/13/2015 1132							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1306	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	320		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-009			
Description: Well #10				Matrix: Aqueous			
Date Sampled: 07/13/2015 1405							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	45	07/14/2015 1307	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	85		0.90	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG13032-010			
Description: Well #32				Matrix: Aqueous			
Date Sampled: 07/13/2015 1425							
Date Received: 07/13/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	200	07/14/2015 1308	MJI		79551

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	190		4.0	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 40152**

Client: <b>Westinhouse Ele Co</b>		Report to Contact: <b>Cynthia Logsdon</b>		Telephone No. / E-mail: <b>647-3171</b>		Quote No.	
Address: <b>5801 Bluff Trl</b>		Sampler's Signature: <i>Randy E. Curless</i>		Analysis (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City: <b>Hookins</b>		Printed Name: <b>Randy E. Curless</b>		Nitrates		Groundwater	
State: <b>SC</b>		Zip Code: <b>29061</b>		Matrix		QG13032	
Project Name		P.O. No.		No. of Containers by Preservative Type		Date	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Matrix	
Well #38		7/13/15		0845		1	
Well #29		7/13/15		0909		1	
Well #30		7/13/15		0930		1	
Well #22		7/13/15		0951		1	
Well #18		7/13/15		1010		1	
Well #28		7/13/15		1038		1	
Well #13C		7/13/15		1105		1	
Well #9		7/13/15		1132		1	
Well #10		7/13/15		1405		1	
Well #32		7/13/15		1425		1	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input checked="" type="checkbox"/> Exposure by Lab <input checked="" type="checkbox"/> Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Unknown		Received by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1510</b>	
1. Rejected by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1510</b>		2. Received by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1530</b>	
2. Rejected by <i>[Signature]</i>		Date <b>7/13/15</b> Time <b>1530</b>		3. Received by		Date <b>7/13/15</b> Time <b>1530</b>	
3. Rejected by <i>[Signature]</i>		Date		4. Laboratory received by <i>[Signature]</i>		Date <b>7-13-15</b> Time <b>1530</b>	
4. Rejected by		Date		LAB USE ONLY		Receipt Temp. <b>11.2 °C</b>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.							

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: RWP / 7-13-15 Lot #: 0613032

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.2/11.2</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>5</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Was collection date & time listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	14. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	16. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>RWP</u> Verified by: _____ Date: <u>7-13-15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG15040  
Date Completed: 07/17/2015



Grant Wilton  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG15040

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

---

Sample Summary  
Westinghouse Electric Company  
Lot Number: QG15040

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Well #17	Aqueous	07/15/2015 0935	07/15/2015
002	Well #39	Aqueous	07/15/2015 1009	07/15/2015
003	Well #43	Aqueous	07/15/2015 1031	07/15/2015

(3 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QG15040

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Well #17	Aqueous	Nitrate - N	353.2	12		mg/L	5
002	Well #39	Aqueous	Nitrate - N	353.2	6.8		mg/L	6
003	Well #43	Aqueous	Nitrate - N	353.2	74		mg/L	7

(3 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-001			
Description: Well #17				Matrix: Aqueous			
Date Sampled: 07/15/2015 0935							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	9	07/15/2015 2239	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	12		0.18	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-002			
Description: Well #39				Matrix: Aqueous			
Date Sampled: 07/15/2015 1009							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	6	07/15/2015 2243	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	6.8		0.12	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG15040-003			
Description: Well #43				Matrix: Aqueous			
Date Sampled: 07/15/2015 1031							
Date Received: 07/15/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	60	07/15/2015 2254	ECP		79765

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	74		1.2	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
[www.shealylab.com](http://www.shealylab.com)

Number 40153

<b>Client:</b> West-Nubhouse Elk Co		<b>Report to Contact:</b> Cynthia Laboucaj <i>(Handwritten: 647-371)</i>		<b>Quote No.</b>	
<b>Address:</b> 8801 Bluff Rd		<b>Sampler's Signature:</b> <i>(Signature)</i>		<b>Analysis (Attach list if more space is needed)</b>	
<b>City:</b> Hopkins	<b>State:</b> SC	<b>Zip Code:</b> 29061			
<b>Project Name:</b> Pandy E-Carus SR					

Sample ID / Description (Containers for each sample may be combined on one line.)	P.O. No.		Matrix		No. of Containers by Preservative Type						Remarks / Cooler I.D.  Groundwater	
	Date	Time	Aquifer	Soil	Rock	Ice	Pack	Bottle	Cover	Seal		
Well #17	7/15/15	0935	G	✓								<i>(Graph showing water level fluctuations over time)</i>
Well #39	7/15/15	1009	G	✓								
Well #43	7/15/15	1031	G	✓								

<b>Turn Around Time Required (Prior lab approval required for expedited TML)</b>		<b>Sample Disposal</b>		<b>Possible Hazard Identification</b>		<b>QC Requirements (Specify)</b>	
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush (Specify)	<input checked="" type="checkbox"/> Return to Client	<input type="checkbox"/> Discard by Lab	<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Poison	<input type="checkbox"/> Unknown
Relinquished by: <i>(Signature)</i>		Date: 7/15/15	Time: 1510	Received by: <i>(Signature)</i>		Date: 7/15/15	Time: 1510
Relinquished by: <i>(Signature)</i>		Date: 7/15/15	Time: 1530	Received by:		Date:	Time:
Relinquished by:		Date:	Time:	Received by:		Date:	Time:
Relinquished by:		Date:	Time:	Laboratory received by: <i>(Signature)</i>		Date: 7/15/15	Time: 1530

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

**DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy**

Document Number: FAD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: F-AD-016  
Revision Number: 17

Page 1 of 1  
Replaces Date: 11/07/14  
Effective Date: 04/30/15

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: KUP/7-15-15 Lot #: 0615040

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>17.7 / 7.7</u> °C / <u>17</u> °C / <u>17</u> °C / <u>17</u> °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present > "pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/IEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KUP</u> Verified by: _____ Date: <u>7-15-15</u>		

Comments:

## Report of Analysis

Westinghouse Electric Company  
PO Drawer R  
Columbia, SC 29250  
Attention: Cynthia Logsdon

Project Name: Nitrate

Lot Number: QG16028  
Date Completed: 07/27/2015



Grant Wilton  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: QG16028

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: QG16028

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WELL #47	Aqueous	07/16/2015 0900	07/16/2015
002	WELL #20	Aqueous	07/16/2015 0934	07/16/2015
003	WELL #27	Aqueous	07/16/2015 0955	07/16/2015
004	WELL #3A	Aqueous	07/16/2015 1035	07/16/2015

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary Westinghouse Electric Company Lot Number: QG16028

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	WELL #47	Aqueous	Nitrate - N	353.2	36		mg/L	5
002	WELL #20	Aqueous	Nitrate - N	353.2	0.024		mg/L	6

(2 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-001			
Description: WELL #47				Matrix: Aqueous			
Date Sampled: 07/16/2015 0900							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	30	07/16/2015 2113	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	36		0.60	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-002			
Description: WELL #20				Matrix: Aqueous			
Date Sampled: 07/16/2015 0934							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2116	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	0.024		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-003			
Description: WELL #27				Matrix: Aqueous			
Date Sampled: 07/16/2015 0955							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2058	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Inorganic non-metals

Client: Westinghouse Electric Company				Laboratory ID: QG16028-004			
Description: WELL #3A				Matrix: Aqueous			
Date Sampled: 07/16/2015 1035							
Date Received: 07/16/2015							

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/16/2015 2104	ECP		79876

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the PQL      J = Estimated result < PQL and  $\geq$  MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



## Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.shealylab.com

**Number 40154**

Client: <u>Westinghouse 843 Co</u>		Report to Contact: <u>Cynthia Longdon</u>		Telephone No. / E-mail: <u>647-3174</u>		Chain No.	
Address: <u>SPOT BLUFF Rd</u>		Sampler's Signature: <u>[Signature]</u>		Analyte (Attach list if more space is needed)		Page <u>1</u> of <u>1</u>	
City: <u>Hopkins</u>		Printed Name: <u>Randy E. Crews Sr</u>		Barcode:		QG16028	
State: <u>SC</u>		Zip Code: <u>29061</u>		Remarks / Cooler I.D.		Groundwater	
Project Name:		Project No.:		Matrix:		No. of Containers by Preservative Type	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date		Time		Matrix	
Well #47		7/16/15		0900		G	
Well #20		7/16/15		0934		G	
Well #27		7/16/15		0955		G	
Well #3A		7/16/15		1035		G	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		QC Requirements (Specify)	
Standard <input type="checkbox"/> Rush <input type="checkbox"/> (Specify)		Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/>		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		Date: <u>7/16/15</u> Time: <u>1455</u> Date: <u>7/16/15</u> Time: <u>1522</u> Date: <u>7/16/15</u> Time: <u>1522</u>	
1. Relinquished by: <u>R. Crews</u>		Date: <u>7/16/15</u> Time: <u>1455</u>		1. Received by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>	
2. Relinquished by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>		2. Received by:		Date: <u>7/16/15</u> Time: <u>1522</u>	
3. Relinquished by:		Date: <u>7/16/15</u> Time: <u>1522</u>		3. Received by:		Date: <u>7/16/15</u> Time: <u>1522</u>	
4. Relinquished by:		Date: <u>7/16/15</u> Time: <u>1522</u>		4. Laboratory received by: <u>[Signature]</u>		Date: <u>7/16/15</u> Time: <u>1522</u>	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on (Date/Time) Yes <input type="checkbox"/> No <input type="checkbox"/> Receipt Temp. <u>66</u> °C			

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: FAD-133 Effective Date: 08-01-2014



**Enclosure e)**

**GEL Lab Reports**

**Gamma Spectroscopy (Fission & Activation Products)  
Results**



November 07, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

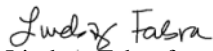
Re: Environmental 2014 - PO 4500633068  
Work Order: 358770

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

  
Lindsay Fabra for  
Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures





# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358770

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/6/14 10:05	1000	X	X	X		X	REC
WELL	#3A	10/8/14 09:42	1000	X	X	X		X	REC
WELL	#7	10/7/14 11:33	1000	X	X	X		X	REC
WELL	#10	10/7/14 11:55	1000	X	X	X		X	REC
WELL	#13R	10/7/14 11:10	1000	X	X	X		X	REC
WELL	#14	10/6/14 14:15	1000	X	X	X		X	REC
WELL	#15	10/6/14 12:22	1000	X	X	X		X	REC
WELL	#16	10/6/14 14:30	1000	X	X	X		X	REC
WELL	#17	10/8/14 11:50	1000	X	X	X		X	REC
WELL	#18	10/7/14 10:12	1000	X	X	X		X	REC
WELL	#20	10/7/14 14:07	1000	X	X	X		X	REC
WELL	#22	10/7/14 09:54	1000	X	X	X		X	REC
WELL	#23R	10/6/14 13:50	1000	X	X	X		X	REC
WELL	#24	10/6/14 09:07	1000	X	X	X		X	REC
WELL	#26	10/6/14 10:42	1000	X	X	X		X	REC
WELL	#27	10/6/14 14:45	1000	X	X	X		X	REC
WELL	#28	10/7/14 10:42	1000	X	X	X		X	REC
WELL	#29	10/7/14 09:11	1000	X	X	X		X	REC
WELL	#30	10/7/14 19:31	1000	X	X	X		X	REC
WELL	#32	10/7/14 14:37	1000	X	X	X		X	REC
WELL	#33	10/6/14 11:36	1000	X	X	X		X	REC
WELL	#38	10/7/14 08:47	1000	X	X	X		X	REC
WELL	#39	10/8/14 14:07	1000	X	X	X		X	REC
WELL	#41R	10/6/14 10:22	1000	X	X	X		X	REC
WELL	#43	10/8/14 14:30	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 10/9/14

Received:

Chris George 10/10/14 0910

Printed Copies are Uncontrolled

Electronically approved records are authenticated in the electronic document management system Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.





Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>Westinghouse</u>		SDG/AR/COC/Work Order: <u>358770</u>		
Received By: <u>CAE</u>		Date Received: <u>10/10/14</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>	
Classified Radioactive II or III by RSO?		/	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?		/		
Package, COC, and/or Samples marked as beryllium or asbestos containing?		/	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?		/	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?		/		
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 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		/		Preservation Method: Ice bags Blue ice Dry ice <u>(None)</u> Other (describe) *all temperatures are recorded in Celsius <u>23°C</u>
2a Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: <u>13041079102</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	/			
4 Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	/			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	/			Sample ID's and containers affected:
7 Are Encore containers present?		/		(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	/			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11 Number of containers received match number indicated on COC?	/			Sample ID's affected:
12 Are sample containers identifiable as GEL provided?		/		
13 COC form is properly signed in relinquished/received sections?	/			
14 Carrier and tracking number.	/			Circle Applicable: FedEx Air FedEx Ground <u>(JPS)</u> Field Services Courier Other <u>1Z 222 210 01 9022 8251</u> <u>1Z 222 210 01 9514 8269</u>
Comments (Use Continuation Form if needed):				

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 358770 GEL Work Order: 358770

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Richard Albee.

Reviewed by

*Ludwig Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 358770001  
Matrix: Water  
Collect Date: 06-OCT-14 10:05  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.786	+/-16.6	26.2		pCi/L		MJH1	10/20/14	0713 1428415	1
Americium-241	U	0.0578	+/-29.3	51.4		pCi/L					
Antimony-124	U	-5.09	+/-8.60	15.2		pCi/L					
Antimony-125	U	-4.15	+/-9.16	15.7		pCi/L					
Barium-133	U	-1.68	+/-5.07	7.68		pCi/L					
Barium-140	U	-4.03	+/-9.11	16.5		pCi/L					
Beryllium-7	U	12.1	+/-30.4	56.3		pCi/L					
Bismuth-212	U	-22.7	+/-53.6	86.0		pCi/L					
Bismuth-214		32.2	+/-14.4	12.6		pCi/L					
Cerium-139	U	-2.46	+/-3.49	5.64		pCi/L					
Cerium-141	U	-2.23	+/-6.83	11.4		pCi/L					
Cerium-144	U	-5.83	+/-23.7	39.7		pCi/L					
Cesium-134	U	2.94	+/-3.96	7.22		pCi/L					
Cesium-136	U	-0.886	+/-9.29	17.0		pCi/L					
Cesium-137	U	0.311	+/-3.65	6.83	10.0	pCi/L					
Chromium-51	U	6.64	+/-37.8	68.4		pCi/L					
Cobalt-56	U	-0.664	+/-3.82	6.97		pCi/L					
Cobalt-57	U	-0.383	+/-2.78	4.71		pCi/L					
Cobalt-58	U	1.55	+/-3.36	6.63		pCi/L					
Cobalt-60	U	-3.21	+/-4.72	6.38		pCi/L					
Europium-152	U	-2.01	+/-10.1	17.9		pCi/L					
Europium-154	U	3.37	+/-10.7	20.8		pCi/L					
Europium-155	U	4.23	+/-11.4	20.2		pCi/L					
Iridium-192	U	-1.99	+/-3.37	5.79		pCi/L					
Iron-59	U	0.244	+/-8.99	16.6		pCi/L					
Lead-210	U	-271	+/-1290	2240		pCi/L					
Lead-212		13.4	+/-9.89	10.6		pCi/L					
Lead-214		19.4	+/-12.9	13.6		pCi/L					
Manganese-54	U	-0.649	+/-2.93	5.37		pCi/L					
Mercury-203	U	1.75	+/-3.64	6.76		pCi/L					
Neodymium-147	U	29.8	+/-51.4	96.6		pCi/L					
Neptunium-239	U	19.4	+/-31.5	55.7		pCi/L					
Niobium-94	U	5.44	+/-3.32	6.54		pCi/L					
Niobium-95	U	1.62	+/-3.47	6.81		pCi/L					
Potassium-40	U	41.8	+/-75.7	66.2		pCi/L					
Promethium-144	U	2.98	+/-3.21	6.46		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 358770001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.04	+/-4.10	7.50	pCi/L
Radium-228	U	0.786	+/-16.6	26.2	pCi/L
Ruthenium-106	U	-0.394	+/-30.9	54.7	pCi/L
Silver-110m	U	-2.15	+/-3.41	5.99	pCi/L
Sodium-22	U	1.19	+/-3.78	7.34	pCi/L
Thallium-208	U	-2.35	+/-4.55	7.26	pCi/L
Thorium-230	U	404	+/-1760	3090	pCi/L
Thorium-234	U	86.6	+/-284	472	pCi/L
Tin-113	U	7.60	+/-6.03	8.35	pCi/L
Uranium-235	U	-4.02	+/-27.5	38.5	pCi/L
Uranium-238	U	86.6	+/-284	472	pCi/L
Yttrium-88	U	0.303	+/-4.16	8.24	pCi/L
Zinc-65	U	0.765	+/-6.97	11.7	pCi/L
Zirconium-95	U	-0.959	+/-6.35	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.05	+/-3.50	5.21	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta		15.5	+/-4.09	4.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.5	+/-122	210	300	pCi/L	GXR1	11/06/14	1820	1434030	3
---------------	---	------	--------	-----	-----	-------	------	----------	------	---------	---

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	358770002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 09:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.4	+/-19.7	39.7		pCi/L		MJH1	10/20/14	0713 1428415	1
Americium-241	U	-61.8	+/-9.95	12.5		pCi/L					
Antimony-124	U	-1.6	+/-11.8	22.7		pCi/L					
Antimony-125	U	-4.15	+/-12.2	21.5		pCi/L					
Barium-133	U	0.192	+/-6.42	10.0		pCi/L					
Barium-140	U	-4.74	+/-9.26	16.7		pCi/L					
Beryllium-7	UI	0.00	+/-51.8	76.1		pCi/L					
Bismuth-212	U	17.7	+/-71.4	130		pCi/L					
Bismuth-214		40.1	+/-20.2	18.9		pCi/L					
Cerium-139	U	1.43	+/-3.95	6.15		pCi/L					
Cerium-141	U	3.52	+/-7.09	12.7		pCi/L					
Cerium-144	U	8.80	+/-23.6	42.1		pCi/L					
Cesium-134	U	-3.26	+/-6.74	9.99		pCi/L					
Cesium-136	U	4.74	+/-13.1	25.0		pCi/L					
Cesium-137	U	2.13	+/-5.31	9.83	10.0	pCi/L					
Chromium-51	U	-3.29	+/-56.1	86.7		pCi/L					
Cobalt-56	U	-1.07	+/-5.68	10.3		pCi/L					
Cobalt-57	U	-0.899	+/-2.90	5.03		pCi/L					
Cobalt-58	U	-2.94	+/-5.37	9.44		pCi/L					
Cobalt-60	U	-6.29	+/-6.12	9.65		pCi/L					
Europium-152	U	10.0	+/-21.8	23.4		pCi/L					
Europium-154	U	-18.2	+/-21.2	23.5		pCi/L					
Europium-155	U	-11.9	+/-14.0	19.8		pCi/L					
Iridium-192	U	-1.88	+/-5.50	8.31		pCi/L					
Iron-59	U	7.10	+/-11.3	21.0		pCi/L					
Lead-210	U	-40.8	+/-104	163		pCi/L					
Lead-212	U	-3.89	+/-11.5	16.5		pCi/L					
Lead-214		27.5	+/-21.0	24.1		pCi/L					
Manganese-54	U	-4.59	+/-5.09	8.62		pCi/L					
Mercury-203	U	4.27	+/-5.02	9.10		pCi/L					
Neodymium-147	U	-41.9	+/-63.0	107		pCi/L					
Neptunium-239	U	-20.4	+/-31.4	53.6		pCi/L					
Niobium-94	U	-1.71	+/-4.98	8.58		pCi/L					
Niobium-95	U	1.21	+/-5.52	10.1		pCi/L					
Potassium-40	U	12.9	+/-72.7	127		pCi/L					
Promethium-144	U	0.461	+/-6.60	9.20		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 358770002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.14	+/-10.7	9.84	pCi/L
Radium-228	U	19.4	+/-19.7	39.7	pCi/L
Ruthenium-106	U	-33.5	+/-45.9	76.8	pCi/L
Silver-110m	U	-1.04	+/-4.97	8.72	pCi/L
Sodium-22	U	-5.72	+/-7.33	8.28	pCi/L
Thallium-208		9.21	+/-10.2	9.03	pCi/L
Thorium-230	U	-4140	+/-928	1200	pCi/L
Thorium-234	U	5.50	+/-106	181	pCi/L
Tin-113	U	5.08	+/-6.89	10.7	pCi/L
Uranium-235	U	0.250	+/-27.8	44.7	pCi/L
Uranium-238	U	5.50	+/-106	181	pCi/L
Yttrium-88	U	-3.4	+/-6.02	10.6	pCi/L
Zinc-65	U	-11	+/-12.9	19.0	pCi/L
Zirconium-95	U	-5.72	+/-10.4	16.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.85	+/-2.69	4.71	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta	U	3.31	+/-2.97	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	17.6	+/-122	211	300	pCi/L	GXR1	11/06/14	1839	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358770003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:33		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	20.7	+/-25.8	30.1		pCi/L		MJH1	10/20/14	0719 1428415	1
Americium-241	U	12.7	+/-13.8	24.1		pCi/L					
Antimony-124	U	-1.15	+/-7.70	14.6		pCi/L					
Antimony-125	U	-7.46	+/-8.82	14.7		pCi/L					
Barium-133	U	2.09	+/-4.38	7.26		pCi/L					
Barium-140	U	-1.49	+/-6.38	10.2		pCi/L					
Beryllium-7	U	7.93	+/-30.9	56.1		pCi/L					
Bismuth-212	U	7.44	+/-43.1	81.4		pCi/L					
Bismuth-214		36.0	+/-13.4	12.1		pCi/L					
Cerium-139	U	-1.78	+/-3.12	5.18		pCi/L					
Cerium-141	U	-1.93	+/-7.47	10.3		pCi/L					
Cerium-144	U	4.28	+/-19.3	34.0		pCi/L					
Cesium-134	U	-0.281	+/-3.58	6.57		pCi/L					
Cesium-136	U	5.32	+/-8.52	15.3		pCi/L					
Cesium-137	U	2.36	+/-6.52	6.55	10.0	pCi/L					
Chromium-51	U	25.9	+/-37.2	69.5		pCi/L					
Cobalt-56	U	-0.376	+/-3.42	6.25		pCi/L					
Cobalt-57	U	1.86	+/-2.56	4.64		pCi/L					
Cobalt-58	U	-1.57	+/-3.65	6.43		pCi/L					
Cobalt-60	U	-0.0155	+/-3.43	6.56		pCi/L					
Europium-152	U	6.84	+/-9.70	18.2		pCi/L					
Europium-154	U	2.13	+/-10.7	20.8		pCi/L					
Europium-155	U	-0.814	+/-11.3	17.7		pCi/L					
Iridium-192	U	0.442	+/-3.47	6.29		pCi/L					
Iron-59	U	-2.31	+/-7.64	13.4		pCi/L					
Lead-210	U	-207	+/-395	686		pCi/L					
Lead-212	U	8.38	+/-8.95	9.58		pCi/L					
Lead-214	U	17.1	+/-15.6	17.5		pCi/L					
Manganese-54	U	-0.658	+/-3.23	5.83		pCi/L					
Mercury-203	U	1.15	+/-3.52	6.50		pCi/L					
Neodymium-147	U	3.01	+/-42.9	77.2		pCi/L					
Neptunium-239	U	16.3	+/-26.1	47.2		pCi/L					
Niobium-94	U	-0.266	+/-3.32	6.06		pCi/L					
Niobium-95	U	-0.936	+/-4.66	6.94		pCi/L					
Potassium-40	U	31.2	+/-57.1	56.9		pCi/L					
Promethium-144	U	0.180	+/-3.40	6.27		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 358770003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.657	+/-4.47	8.01	pCi/L
Radium-228	U	20.7	+/-25.8	30.1	pCi/L
Ruthenium-106	U	24.8	+/-27.9	56.0	pCi/L
Silver-110m	U	1.97	+/-3.45	6.00	pCi/L
Sodium-22	U	0.970	+/-3.80	7.42	pCi/L
Thallium-208	U	3.86	+/-6.23	5.84	pCi/L
Thorium-230	U	-1400	+/-1220	1680	pCi/L
Thorium-234	U	174	+/-241	201	pCi/L
Tin-113	U	-2.68	+/-4.69	8.02	pCi/L
Uranium-235	U	11.9	+/-29.1	32.4	pCi/L
Uranium-238	U	174	+/-241	201	pCi/L
Yttrium-88	U	1.11	+/-4.23	8.38	pCi/L
Zinc-65	U	3.38	+/-8.62	14.2	pCi/L
Zirconium-95	U	3.30	+/-6.26	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		5.89	+/-3.86	4.88	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta		114	+/-7.63	3.78	5.00	pCi/L					
Alpha	U	4.21	+/-4.23	4.85	5.00	pCi/L	JXH3	11/05/14	1426	1430824	3
Beta		116	+/-6.31	2.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	161	+/-121	199	300	pCi/L	GXR1	11/06/14	1857	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358770003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358770004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:55		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	15.5	+/-14.6	29.6		pCi/L		MJH1	10/20/14	0720 1428415	1
Americium-241	U	-41.5	+/-20.2	32.8		pCi/L					
Antimony-124	U	0.0168	+/-8.95	17.5		pCi/L					
Antimony-125	U	-0.638	+/-12.2	21.7		pCi/L					
Barium-133	U	2.71	+/-6.17	10.0		pCi/L					
Barium-140	U	-2.91	+/-8.43	15.5		pCi/L					
Beryllium-7	U	12.9	+/-38.8	70.8		pCi/L					
Bismuth-212	U	-67.4	+/-70.7	108		pCi/L					
Bismuth-214		46.7	+/-15.8	17.3		pCi/L					
Cerium-139	U	-1.64	+/-3.53	6.00		pCi/L					
Cerium-141	U	1.26	+/-10.4	12.2		pCi/L					
Cerium-144	U	-1.42	+/-28.2	43.1		pCi/L					
Cesium-134	U	2.52	+/-4.64	8.91		pCi/L					
Cesium-136	U	-1.64	+/-9.87	17.9		pCi/L					
Cesium-137	U	-1.17	+/-5.11	7.62	10.0	pCi/L					
Chromium-51	U	8.79	+/-46.4	84.1		pCi/L					
Cobalt-56	U	0.927	+/-4.95	8.82		pCi/L					
Cobalt-57	U	-1.34	+/-3.07	5.28		pCi/L					
Cobalt-58	U	4.31	+/-7.04	8.80		pCi/L					
Cobalt-60	U	0.799	+/-3.71	7.15		pCi/L					
Europium-152	U	8.70	+/-13.1	22.4		pCi/L					
Europium-154	U	5.91	+/-9.88	20.1		pCi/L					
Europium-155	U	2.42	+/-13.1	23.3		pCi/L					
Iridium-192	U	-1.26	+/-4.38	7.76		pCi/L					
Iron-59	U	4.47	+/-8.02	15.9		pCi/L					
Lead-210	U	-707	+/-627	892		pCi/L					
Lead-212	UI	0.00	+/-10.4	14.4		pCi/L					
Lead-214		51.2	+/-16.7	16.1		pCi/L					
Manganese-54	U	1.49	+/-4.42	8.30		pCi/L					
Mercury-203	U	5.37	+/-4.67	8.49		pCi/L					
Neodymium-147	U	-19.8	+/-56.8	98.8		pCi/L					
Neptunium-239	U	-0.109	+/-34.3	60.2		pCi/L					
Niobium-94	U	-2.15	+/-4.01	6.76		pCi/L					
Niobium-95	U	2.39	+/-5.15	8.32		pCi/L					
Potassium-40	U	34.8	+/-60.0	67.0		pCi/L					
Promethium-144	U	-0.932	+/-5.26	8.07		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358770004	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.67	+/-5.39	9.80	pCi/L
Radium-228	U	15.5	+/-14.6	29.6	pCi/L
Ruthenium-106	U	-2.97	+/-43.1	65.6	pCi/L
Silver-110m	U	-0.795	+/-3.98	6.96	pCi/L
Sodium-22	U	1.41	+/-3.56	7.06	pCi/L
Thallium-208	U	-1.19	+/-6.21	8.61	pCi/L
Thorium-230	U	-1200	+/-1460	2370	pCi/L
Thorium-234	U	32.6	+/-194	337	pCi/L
Tin-113	U	-0.902	+/-5.79	10.3	pCi/L
Uranium-235	U	4.22	+/-34.9	43.4	pCi/L
Uranium-238	U	32.6	+/-194	337	pCi/L
Yttrium-88	U	-5.0	+/-4.43	6.91	pCi/L
Zinc-65	U	4.05	+/-8.91	15.3	pCi/L
Zirconium-95	U	-4.91	+/-8.37	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.62	+/-3.25	4.81	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		83.4	+/-5.34	2.49	5.00	pCi/L					
Alpha	U	-0.0534	+/-2.74	4.84	5.00	pCi/L	JXH3	11/05/14	1543	1430824	3
Beta		78.3	+/-6.29	3.43	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	129	+/-126	211	300	pCi/L	GXR1	11/06/14	1915	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			89.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358770004	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-22.8	2.23		pCi/L		MJH1	10/20/14	0720	1428415	1
Americium-241	U	2.08	+/-22.8	37.3		pCi/L						
Antimony-124	U	4.67	+/-14.6	20.3		pCi/L						
Antimony-125	U	-4.45	+/-8.68	15.0		pCi/L						
Barium-133	U	2.17	+/-4.24	7.15		pCi/L						
Barium-140	U	3.71	+/-6.72	14.5		pCi/L						
Beryllium-7	U	9.51	+/-31.7	58.1		pCi/L						
Bismuth-212	U	23.1	+/-48.8	82.7		pCi/L						
Bismuth-214		33.3	+/-14.6	12.1		pCi/L						
Cerium-139	U	-1.55	+/-3.03	4.47		pCi/L						
Cerium-141	U	-6.53	+/-7.07	9.57		pCi/L						
Cerium-144	U	-0.767	+/-18.3	32.0		pCi/L						
Cesium-134	U	4.00	+/-3.48	6.78		pCi/L						
Cesium-136	U	5.88	+/-8.32	16.7		pCi/L						
Cesium-137	U	1.18	+/-3.40	6.55	10.0	pCi/L						
Chromium-51	U	-13.6	+/-33.1	58.3		pCi/L						
Cobalt-56	U	-1.63	+/-3.73	6.60		pCi/L						
Cobalt-57	U	-0.827	+/-2.52	4.34		pCi/L						
Cobalt-58	U	-0.927	+/-3.99	6.24		pCi/L						
Cobalt-60	U	4.13	+/-4.97	7.60		pCi/L						
Europium-152	U	-2.22	+/-9.63	17.1		pCi/L						
Europium-154	U	4.91	+/-9.52	19.2		pCi/L						
Europium-155	U	11.0	+/-11.8	18.4		pCi/L						
Iridium-192	U	2.03	+/-3.24	6.14		pCi/L						
Iron-59	U	-6.02	+/-6.69	10.8		pCi/L						
Lead-210	U	327	+/-848	1320		pCi/L						
Lead-212	U	3.97	+/-8.33	8.96		pCi/L						
Lead-214	U	15.9	+/-13.0	17.5		pCi/L						
Manganese-54	U	-1.26	+/-3.26	5.81		pCi/L						
Mercury-203	U	1.06	+/-3.50	6.48		pCi/L						
Neodymium-147	U	-13.6	+/-50.8	76.8		pCi/L						
Neptunium-239	U	-2.85	+/-27.0	47.1		pCi/L						
Niobium-94	U	1.46	+/-3.39	6.48		pCi/L						
Niobium-95	U	-2.56	+/-4.88	6.86		pCi/L						
Potassium-40	U	12.1	+/-53.8	95.9		pCi/L						
Promethium-144	U	1.07	+/-3.29	6.28		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.29	+/-3.97	6.95	pCi/L
Radium-228	UI	0.00	+/-22.8	2.23	pCi/L
Ruthenium-106	U	4.13	+/-28.5	51.7	pCi/L
Silver-110m	U	-0.656	+/-3.06	5.64	pCi/L
Sodium-22	U	1.79	+/-3.37	6.79	pCi/L
Thallium-208	U	-2.66	+/-4.42	6.95	pCi/L
Thorium-230	U	908	+/-1620	2550	pCi/L
Thorium-234	U	238	+/-274	417	pCi/L
Tin-113	U	-1.42	+/-4.16	7.30	pCi/L
Uranium-235	U	11.3	+/-31.2	29.8	pCi/L
Uranium-238	U	238	+/-274	417	pCi/L
Yttrium-88	U	3.95	+/-3.22	8.50	pCi/L
Zinc-65	U	-2.19	+/-8.93	13.5	pCi/L
Zirconium-95	U	-1.69	+/-6.68	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.05	+/-2.70	5.37	5.00	pCi/L	JXH3	11/04/14	1819	1430824	2
Beta		84.9	+/-7.76	4.89	5.00	pCi/L					
Alpha		4.93	+/-3.48	4.71	5.00	pCi/L	JXH3	11/05/14	1354	1430824	3
Beta		80.5	+/-6.94	3.37	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	191	+/-126	205	300	pCi/L	GXR1	11/06/14	1933	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.2	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358770005

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358770006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:15		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-20.6	31.9		pCi/L		MJH1	10/20/14	0730 1428415	1
Americium-241	U	8.86	+/-29.3	54.5		pCi/L					
Antimony-124	U	-9.61	+/-9.82	15.5		pCi/L					
Antimony-125	U	-4.7	+/-10.9	18.6		pCi/L					
Barium-133	U	-0.854	+/-5.43	8.37		pCi/L					
Barium-140	U	-5.51	+/-10.4	18.4		pCi/L					
Beryllium-7	U	4.01	+/-36.4	65.0		pCi/L					
Bismuth-212	U	24.0	+/-57.2	109		pCi/L					
Bismuth-214		27.3	+/-14.8	13.1		pCi/L					
Cerium-139	U	-3.52	+/-3.24	5.18		pCi/L					
Cerium-141	U	-1.21	+/-7.40	11.1		pCi/L					
Cerium-144	U	7.72	+/-21.6	38.6		pCi/L					
Cesium-134	U	2.36	+/-3.89	7.75		pCi/L					
Cesium-136	U	2.36	+/-10.1	19.8		pCi/L					
Cesium-137	U	-3.14	+/-3.72	6.21	10.0	pCi/L					
Chromium-51	U	-6.66	+/-47.2	74.6		pCi/L					
Cobalt-56	U	-0.582	+/-4.86	8.08		pCi/L					
Cobalt-57	U	0.190	+/-2.74	4.85		pCi/L					
Cobalt-58	U	-2.26	+/-4.21	7.20		pCi/L					
Cobalt-60	U	0.553	+/-4.49	8.62		pCi/L					
Europium-152	U	8.87	+/-11.6	20.7		pCi/L					
Europium-154	U	-0.674	+/-11.4	21.6		pCi/L					
Europium-155	U	-3.76	+/-13.9	21.7		pCi/L					
Iridium-192	U	3.77	+/-4.09	7.17		pCi/L					
Iron-59	U	5.56	+/-7.88	16.6		pCi/L					
Lead-210	U	-11.7	+/-1450	2330		pCi/L					
Lead-212	U	5.03	+/-9.27	13.4		pCi/L					
Lead-214	U	6.42	+/-13.7	18.6		pCi/L					
Manganese-54	U	-2.52	+/-4.13	6.95		pCi/L					
Mercury-203	U	0.410	+/-3.97	7.26		pCi/L					
Neodymium-147	U	-58	+/-52.1	86.2		pCi/L					
Neptunium-239	U	-14.3	+/-34.5	49.5		pCi/L					
Niobium-94	U	2.76	+/-3.67	7.24		pCi/L					
Niobium-95	U	-4.72	+/-4.10	6.43		pCi/L					
Potassium-40	U	-15.1	+/-61.9	106		pCi/L					
Promethium-144	U	0.717	+/-4.01	7.43		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358770006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.825	+/-5.34	8.47	pCi/L
Radium-228	UI	0.00	+/-20.6	31.9	pCi/L
Ruthenium-106	U	15.4	+/-36.3	69.5	pCi/L
Silver-110m	U	0.819	+/-3.70	6.99	pCi/L
Sodium-22	U	-0.291	+/-4.01	7.58	pCi/L
Thallium-208	U	5.65	+/-7.49	7.50	pCi/L
Thorium-230	U	-860	+/-1770	2780	pCi/L
Thorium-234	U	-221	+/-288	429	pCi/L
Tin-113	U	-1.09	+/-5.41	8.26	pCi/L
Uranium-235	U	-6.4	+/-27.5	37.9	pCi/L
Uranium-238	U	-221	+/-288	429	pCi/L
Yttrium-88	U	4.80	+/-4.90	11.2	pCi/L
Zinc-65	U	10.1	+/-9.73	18.8	pCi/L
Zirconium-95	U	-0.336	+/-6.61	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.39	+/-2.91	5.46	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta		13.3	+/-3.96	4.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	81.1	+/-117	199	300	pCi/L	GXR1	11/06/14	1951	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358770007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:22		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.08	+/-24.6	32.0		pCi/L		MJH1	10/20/14	0739 1428415	1
Americium-241	U	27.6	+/-32.0	52.4		pCi/L					
Antimony-124	U	-6.55	+/-14.4	16.3		pCi/L					
Antimony-125	U	4.40	+/-10.5	19.0		pCi/L					
Barium-133	U	2.10	+/-4.83	7.82		pCi/L					
Barium-140	U	1.19	+/-9.16	18.0		pCi/L					
Beryllium-7	U	-23.6	+/-33.9	59.1		pCi/L					
Bismuth-212	U	48.8	+/-48.0	97.4		pCi/L					
Bismuth-214		30.8	+/-14.1	14.3		pCi/L					
Cerium-139	U	0.721	+/-3.30	5.94		pCi/L					
Cerium-141	U	0.0565	+/-9.05	13.1		pCi/L					
Cerium-144	U	3.69	+/-21.5	38.9		pCi/L					
Cesium-134	U	-0.652	+/-4.39	7.88		pCi/L					
Cesium-136	U	3.39	+/-9.61	16.6		pCi/L					
Cesium-137	U	0.194	+/-3.83	7.07	10.0	pCi/L					
Chromium-51	U	23.1	+/-40.5	74.0		pCi/L					
Cobalt-56	U	-4.46	+/-4.12	6.58		pCi/L					
Cobalt-57	U	1.29	+/-2.84	5.23		pCi/L					
Cobalt-58	U	1.03	+/-3.80	7.21		pCi/L					
Cobalt-60	U	0.269	+/-3.84	7.46		pCi/L					
Europium-152	U	5.47	+/-10.7	19.5		pCi/L					
Europium-154	U	-9.09	+/-10.5	17.6		pCi/L					
Europium-155	U	0.636	+/-12.5	22.7		pCi/L					
Iridium-192	U	0.984	+/-3.64	6.55		pCi/L					
Iron-59	U	0.367	+/-9.13	17.3		pCi/L					
Lead-210	U	719	+/-1260	2230		pCi/L					
Lead-212	U	5.53	+/-10.7	14.4		pCi/L					
Lead-214		23.5	+/-15.2	13.7		pCi/L					
Manganese-54	U	1.54	+/-3.29	6.41		pCi/L					
Mercury-203	U	-2.49	+/-3.83	6.46		pCi/L					
Neodymium-147	U	7.13	+/-62.3	101		pCi/L					
Neptunium-239	U	8.84	+/-30.5	55.8		pCi/L					
Niobium-94	U	2.28	+/-3.41	6.63		pCi/L					
Niobium-95	U	3.38	+/-3.91	7.80		pCi/L					
Potassium-40	U	-49.9	+/-57.9	89.7		pCi/L					
Promethium-144	U	3.37	+/-3.19	6.49		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 15  
Sample ID: 358770007

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.898	+/-4.46	7.67	pCi/L
Radium-228	U	4.08	+/-24.6	32.0	pCi/L
Ruthenium-106	U	2.99	+/-31.9	59.3	pCi/L
Silver-110m	U	-1.16	+/-3.67	6.52	pCi/L
Sodium-22	U	-3.27	+/-3.69	6.17	pCi/L
Thallium-208	U	3.80	+/-4.95	6.80	pCi/L
Thorium-230	U	1290	+/-2100	3310	pCi/L
Thorium-234	U	280	+/-403	495	pCi/L
Tin-113	U	1.04	+/-5.92	9.20	pCi/L
Uranium-235	U	9.98	+/-34.0	43.2	pCi/L
Uranium-238	U	280	+/-403	495	pCi/L
Yttrium-88	U	-0.299	+/-4.94	9.32	pCi/L
Zinc-65	U	3.55	+/-8.38	15.0	pCi/L
Zirconium-95	U	2.67	+/-6.03	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.47	+/-3.23	2.82	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta	242	+/-11.7	4.64	5.00	pCi/L					
Alpha	8.97	+/-4.08	4.78	5.00	pCi/L	JXH3	11/05/14	1544	1430824	3
Beta	238	+/-10.9	3.45	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	378	+/-143	221	300	pCi/L	GXR1	11/06/14	2009	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358770007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	358770008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.1	+/-27.0	24.7		pCi/L		MJH1	10/20/14	0843 1428415	1
Americium-241	U	11.2	+/-29.3	46.6		pCi/L					
Antimony-124	U	1.84	+/-9.83	19.9		pCi/L					
Antimony-125	U	3.70	+/-9.96	18.8		pCi/L					
Barium-133	U	-0.53	+/-5.80	8.69		pCi/L					
Barium-140	U	0.515	+/-9.20	18.1		pCi/L					
Beryllium-7	U	14.3	+/-35.5	66.9		pCi/L					
Bismuth-212	U	67.9	+/-63.8	99.8		pCi/L					
Bismuth-214		23.6	+/-17.2	14.2		pCi/L					
Cerium-139	U	0.0307	+/-3.71	6.60		pCi/L					
Cerium-141	U	-1.61	+/-7.13	12.6		pCi/L					
Cerium-144	U	15.3	+/-24.1	44.5		pCi/L					
Cesium-134	U	0.363	+/-4.26	7.57		pCi/L					
Cesium-136	U	-11.5	+/-10.4	16.7		pCi/L					
Cesium-137	U	-3.0	+/-4.32	7.23	10.0	pCi/L					
Chromium-51	U	-5.56	+/-44.9	77.4		pCi/L					
Cobalt-56	U	-0.166	+/-4.14	7.74		pCi/L					
Cobalt-57	U	0.00771	+/-3.10	5.59		pCi/L					
Cobalt-58	UI	0.00	+/-4.83	7.31		pCi/L					
Cobalt-60	U	-1.72	+/-4.65	8.16		pCi/L					
Europium-152	U	-6.08	+/-11.8	19.7		pCi/L					
Europium-154	U	2.49	+/-12.1	23.3		pCi/L					
Europium-155	U	7.88	+/-13.4	23.3		pCi/L					
Iridium-192	U	-0.0923	+/-4.35	7.55		pCi/L					
Iron-59	U	-3.22	+/-8.33	14.9		pCi/L					
Lead-210	U	1310	+/-1890	1640		pCi/L					
Lead-212		11.5	+/-11.6	11.0		pCi/L					
Lead-214	U	14.2	+/-16.0	15.5		pCi/L					
Manganese-54	U	0.688	+/-3.96	7.53		pCi/L					
Mercury-203	U	-1.63	+/-4.61	7.88		pCi/L					
Neodymium-147	U	-1.02	+/-57.2	104		pCi/L					
Neptunium-239	U	-5.48	+/-32.1	57.5		pCi/L					
Niobium-94	U	-2.83	+/-3.90	6.47		pCi/L					
Niobium-95	U	-0.163	+/-4.93	8.56		pCi/L					
Potassium-40	U	-22	+/-62.0	104		pCi/L					
Promethium-144	U	3.28	+/-3.93	7.60		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 16 Project: WNUC00127  
Sample ID: 358770008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.96	+/-5.18	8.62	pCi/L
Radium-228	U	13.1	+/-27.0	24.7	pCi/L
Ruthenium-106	U	8.49	+/-37.7	69.3	pCi/L
Silver-110m	U	3.23	+/-3.73	7.32	pCi/L
Sodium-22	U	0.810	+/-4.27	8.19	pCi/L
Thallium-208	U	4.88	+/-5.77	7.40	pCi/L
Thorium-230	U	-106	+/-1890	2880	pCi/L
Thorium-234	U	151	+/-349	370	pCi/L
Tin-113	U	-3.21	+/-5.28	9.24	pCi/L
Uranium-235	U	-31.1	+/-28.6	42.8	pCi/L
Uranium-238	U	151	+/-349	370	pCi/L
Yttrium-88	U	-3.41	+/-4.46	7.42	pCi/L
Zinc-65	U	-2.36	+/-9.82	15.0	pCi/L
Zirconium-95	U	4.55	+/-7.69	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.749	+/-2.15	4.71	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta		17.6	+/-3.46	3.44	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	25.6	+/-137	238	300	pCi/L	GXR1	11/06/14	2027	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			78.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358770009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 11:50		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.35	+/-17.6	30.6		pCi/L		MJH1	10/20/14	1147 1428415	1
Americium-241	U	2.53	+/-12.7	20.6		pCi/L					
Antimony-124	U	4.16	+/-8.39	18.0		pCi/L					
Antimony-125	U	1.41	+/-9.22	17.2		pCi/L					
Barium-133	U	1.55	+/-5.32	8.73		pCi/L					
Barium-140	U	-0.867	+/-8.12	15.3		pCi/L					
Beryllium-7	U	9.95	+/-39.6	64.6		pCi/L					
Bismuth-212	U	35.6	+/-53.7	104		pCi/L					
Bismuth-214		22.0	+/-11.1	13.1		pCi/L					
Cerium-139	U	0.198	+/-3.88	5.99		pCi/L					
Cerium-141	U	-1.23	+/-6.62	11.6		pCi/L					
Cerium-144	U	21.2	+/-23.2	42.8		pCi/L					
Cesium-134	U	-0.373	+/-4.22	6.61		pCi/L					
Cesium-136	U	3.07	+/-8.86	17.5		pCi/L					
Cesium-137	U	2.15	+/-4.26	7.90	10.0	pCi/L					
Chromium-51	U	-14.7	+/-41.9	70.6		pCi/L					
Cobalt-56	U	-2.77	+/-4.37	7.31		pCi/L					
Cobalt-57	U	3.97	+/-3.00	5.46		pCi/L					
Cobalt-58	U	-2.45	+/-5.03	7.23		pCi/L					
Cobalt-60	U	0.618	+/-4.56	8.05		pCi/L					
Europium-152	U	-5.54	+/-11.2	18.7		pCi/L					
Europium-154	U	-4.17	+/-10.5	19.0		pCi/L					
Europium-155	U	7.16	+/-11.7	21.4		pCi/L					
Iridium-192	U	0.268	+/-4.14	7.20		pCi/L					
Iron-59	U	3.03	+/-4.81	15.3		pCi/L					
Lead-210	U	98.7	+/-266	330		pCi/L					
Lead-212	U	5.59	+/-9.48	13.5		pCi/L					
Lead-214	U	13.6	+/-17.6	15.3		pCi/L					
Manganese-54	U	-1.27	+/-3.64	6.35		pCi/L					
Mercury-203	U	1.10	+/-4.47	7.86		pCi/L					
Neodymium-147	U	11.1	+/-47.4	88.9		pCi/L					
Neptunium-239	U	-2.23	+/-34.9	54.2		pCi/L					
Niobium-94	U	2.27	+/-7.92	6.32		pCi/L					
Niobium-95	U	2.15	+/-4.17	7.96		pCi/L					
Potassium-40	U	1.77	+/-60.1	118		pCi/L					
Promethium-144	U	-1.63	+/-4.92	7.31		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358770009	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.625	+/-4.35	7.89	pCi/L
Radium-228	U	5.35	+/-17.6	30.6	pCi/L
Ruthenium-106	U	15.3	+/-34.1	64.7	pCi/L
Silver-110m	U	-6.61	+/-4.79	6.00	pCi/L
Sodium-22	U	-1.6	+/-3.68	6.61	pCi/L
Thallium-208	U	0.999	+/-6.80	6.98	pCi/L
Thorium-230	U	1430	+/-1020	1770	pCi/L
Thorium-234	U	51.0	+/-138	218	pCi/L
Tin-113	U	-0.411	+/-4.81	8.76	pCi/L
Uranium-235	U	-19.9	+/-26.7	40.4	pCi/L
Uranium-238	U	51.0	+/-138	218	pCi/L
Yttrium-88	U	2.56	+/-4.57	9.82	pCi/L
Zinc-65	U	4.76	+/-7.45	14.1	pCi/L
Zirconium-95	U	2.25	+/-7.60	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.294	+/-2.83	4.94	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		383	+/-14.6	3.69	5.00	pCi/L					
Alpha		6.20	+/-4.15	4.64	5.00	pCi/L	JXH3	11/05/14	1551	1430824	3
Beta		386	+/-16.3	4.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	828	+/-153	210	300	pCi/L	GXR1	11/06/14	2045	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.5	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358770009	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	358770010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:12		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	23.7	+/-13.8	29.9		pCi/L		MJH1	10/20/14	1154 1428415	1
Americium-241	U	-15.6	+/-24.6	42.8		pCi/L					
Antimony-124	U	-1.74	+/-10.3	20.0		pCi/L					
Antimony-125	U	-3.28	+/-12.4	22.0		pCi/L					
Barium-133	U	-8.92	+/-6.57	10.9		pCi/L					
Barium-140	U	-5.06	+/-10.3	18.6		pCi/L					
Beryllium-7	U	62.4	+/-53.8	68.1		pCi/L					
Bismuth-212	U	25.0	+/-75.6	121		pCi/L					
Bismuth-214	U	4.71	+/-11.4	20.0		pCi/L					
Cerium-139	U	0.405	+/-4.06	7.14		pCi/L					
Cerium-141	U	-2.82	+/-9.70	15.4		pCi/L					
Cerium-144	U	-22.7	+/-30.9	47.9		pCi/L					
Cesium-134	U	2.38	+/-5.30	10.3		pCi/L					
Cesium-136	U	-3.76	+/-11.6	20.9		pCi/L					
Cesium-137	U	-0.71	+/-6.08	8.75	10.0	pCi/L					
Chromium-51	U	7.88	+/-50.1	91.7		pCi/L					
Cobalt-56	U	-1.48	+/-5.17	9.37		pCi/L					
Cobalt-57	U	0.0849	+/-3.68	6.50		pCi/L					
Cobalt-58	U	-0.0848	+/-5.45	10.1		pCi/L					
Cobalt-60	U	-0.413	+/-5.22	9.61		pCi/L					
Europium-152	U	-7.53	+/-14.3	25.0		pCi/L					
Europium-154	U	-15.8	+/-11.9	17.2		pCi/L					
Europium-155	U	18.2	+/-15.0	28.0		pCi/L					
Iridium-192	U	2.97	+/-4.87	9.15		pCi/L					
Iron-59	U	10.0	+/-6.79	15.9		pCi/L					
Lead-210	U	394	+/-932	950		pCi/L					
Lead-212	UI	0.00	+/-11.7	16.7		pCi/L					
Lead-214	U	8.00	+/-12.8	22.4		pCi/L					
Manganese-54	U	0.186	+/-4.88	9.10		pCi/L					
Mercury-203	U	0.115	+/-5.28	9.11		pCi/L					
Neodymium-147	U	46.2	+/-71.6	135		pCi/L					
Neptunium-239	U	12.6	+/-37.9	68.0		pCi/L					
Niobium-94	U	1.69	+/-5.60	8.91		pCi/L					
Niobium-95	U	0.131	+/-5.43	9.70		pCi/L					
Potassium-40	U	50.2	+/-65.3	79.2		pCi/L					
Promethium-144	U	-1.2	+/-5.85	9.37		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 358770010  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.0846	+/-6.07	10.9	pCi/L
Radium-228	U	23.7	+/-13.8	29.9	pCi/L
Ruthenium-106	U	-11.9	+/-43.4	75.8	pCi/L
Silver-110m	U	-0.134	+/-4.44	7.96	pCi/L
Sodium-22	U	-6.4	+/-4.32	6.02	pCi/L
Thallium-208	U	-4.86	+/-6.71	9.52	pCi/L
Thorium-230	U	-329	+/-1670	2830	pCi/L
Thorium-234	U	-136	+/-223	386	pCi/L
Tin-113	U	-2.97	+/-6.22	10.9	pCi/L
Uranium-235	U	18.4	+/-35.1	53.2	pCi/L
Uranium-238	U	-136	+/-223	386	pCi/L
Yttrium-88	U	-3.27	+/-4.70	8.06	pCi/L
Zinc-65	U	-0.19	+/-10.3	19.0	pCi/L
Zirconium-95	U	-2.05	+/-9.50	16.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-2.82	+/-6.88	12.5	5.00	pCi/L	JXH3	11/04/14	1857	1430824	2
Beta		167	+/-7.13	4.95	5.00	pCi/L					
Alpha		10.2	+/-6.21	9.51	5.00	pCi/L	JXH3	11/05/14	1935	1430824	3
Beta		155	+/-7.12	6.18	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	249	+/-128	205	300	pCi/L	GXR1	11/06/14	2103	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18  
Sample ID: 358770010

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	358770011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.15	+/-17.1	29.2		pCi/L		MJH1	10/20/14	1151 1428415	1
Americium-241	U	-3.75	+/-14.5	21.8		pCi/L					
Antimony-124	U	-1.2	+/-7.41	14.6		pCi/L					
Antimony-125	U	-2.59	+/-8.77	15.2		pCi/L					
Barium-133	U	1.11	+/-4.18	7.63		pCi/L					
Barium-140	U	-4.38	+/-8.18	14.5		pCi/L					
Beryllium-7	U	-0.321	+/-31.7	59.1		pCi/L					
Bismuth-212	U	30.0	+/-49.3	97.5		pCi/L					
Bismuth-214	U	1.56	+/-9.27	13.5		pCi/L					
Cerium-139	U	0.952	+/-3.17	5.79		pCi/L					
Cerium-141	U	0.0753	+/-6.19	11.2		pCi/L					
Cerium-144	U	-3.8	+/-20.9	37.3		pCi/L					
Cesium-134	U	-3.21	+/-3.74	6.18		pCi/L					
Cesium-136	U	6.53	+/-9.59	19.3		pCi/L					
Cesium-137	U	4.79	+/-3.84	5.63	10.0	pCi/L					
Chromium-51	U	-19.7	+/-43.5	64.0		pCi/L					
Cobalt-56	U	-0.788	+/-4.31	7.75		pCi/L					
Cobalt-57	U	1.29	+/-2.88	4.78		pCi/L					
Cobalt-58	U	2.45	+/-3.33	6.87		pCi/L					
Cobalt-60	U	2.56	+/-5.36	8.91		pCi/L					
Europium-152	U	8.98	+/-10.4	19.8		pCi/L					
Europium-154	U	8.86	+/-11.0	23.7		pCi/L					
Europium-155	U	5.56	+/-10.2	19.1		pCi/L					
Iridium-192	U	0.785	+/-3.99	6.38		pCi/L					
Iron-59	U	-0.72	+/-6.24	11.7		pCi/L					
Lead-210	U	-206	+/-333	516		pCi/L					
Lead-212	U	3.16	+/-10.1	13.6		pCi/L					
Lead-214	U	-4.45	+/-9.61	15.2		pCi/L					
Manganese-54	U	0.684	+/-3.43	6.54		pCi/L					
Mercury-203	U	0.564	+/-3.80	6.86		pCi/L					
Neodymium-147	U	18.9	+/-46.8	91.3		pCi/L					
Neptunium-239	U	-5.08	+/-26.3	47.4		pCi/L					
Niobium-94	U	-2.41	+/-4.33	6.34		pCi/L					
Niobium-95	U	4.29	+/-3.24	7.10		pCi/L					
Potassium-40	U	25.8	+/-53.9	74.6		pCi/L					
Promethium-144	U	4.39	+/-3.96	7.33		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 358770011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.09	+/-4.55	8.22	pCi/L
Radium-228	U	-3.15	+/-17.1	29.2	pCi/L
Ruthenium-106	U	-12.4	+/-32.9	58.8	pCi/L
Silver-110m	U	1.62	+/-3.17	5.70	pCi/L
Sodium-22	U	2.66	+/-3.91	8.28	pCi/L
Thallium-208	U	4.59	+/-4.91	6.09	pCi/L
Thorium-230	U	-101	+/-1130	1670	pCi/L
Thorium-234	U	46.7	+/-186	241	pCi/L
Tin-113	U	-1.63	+/-4.56	7.83	pCi/L
Uranium-235	U	-8.51	+/-24.5	39.9	pCi/L
Uranium-238	U	46.7	+/-186	241	pCi/L
Yttrium-88	U	-0.739	+/-4.49	8.49	pCi/L
Zinc-65	U	8.48	+/-5.92	14.7	pCi/L
Zirconium-95	U	2.74	+/-6.46	12.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.538	+/-2.06	3.82	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	U	2.20	+/-2.87	4.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	61.3	+/-118	201	300	pCi/L	GXR1	11/06/14	2120	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			92.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:54		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	6.53	+/-17.3	32.3		pCi/L		MJH1	10/20/14	1152	1428415	1
Americium-241	U	10.0	+/-36.3	65.1		pCi/L						
Antimony-124	U	-1.68	+/-10.5	20.3		pCi/L						
Antimony-125	U	-0.105	+/-10.1	17.6		pCi/L						
Barium-133	U	3.93	+/-5.15	8.97		pCi/L						
Barium-140	U	-4.7	+/-9.61	17.4		pCi/L						
Beryllium-7	U	-6.06	+/-39.2	69.2		pCi/L						
Bismuth-212	U	5.27	+/-63.5	103		pCi/L						
Bismuth-214	UI	0.00	+/-16.7	14.6		pCi/L						
Cerium-139	U	2.34	+/-3.95	6.97		pCi/L						
Cerium-141	U	0.126	+/-7.91	13.5		pCi/L						
Cerium-144	U	14.3	+/-26.3	46.6		pCi/L						
Cesium-134	U	4.52	+/-3.73	8.23		pCi/L						
Cesium-136	U	-7.82	+/-10.2	17.0		pCi/L						
Cesium-137	U	2.34	+/-3.92	7.20	10.0	pCi/L						
Chromium-51	U	-4.74	+/-46.1	72.6		pCi/L						
Cobalt-56	U	6.52	+/-3.44	8.17		pCi/L						
Cobalt-57	U	-1.33	+/-3.40	5.69		pCi/L						
Cobalt-58	U	-1.05	+/-4.10	7.52		pCi/L						
Cobalt-60	U	2.57	+/-3.59	7.94		pCi/L						
Europium-152	U	1.07	+/-11.3	20.5		pCi/L						
Europium-154	U	5.35	+/-11.0	22.9		pCi/L						
Europium-155	U	4.47	+/-14.3	25.3		pCi/L						
Iridium-192	U	2.89	+/-3.77	7.28		pCi/L						
Iron-59	U	2.75	+/-9.66	18.8		pCi/L						
Lead-210	U	873	+/-1460	2710		pCi/L						
Lead-212	U	7.75	+/-10.4	12.9		pCi/L						
Lead-214	U	13.4	+/-13.8	13.5		pCi/L						
Manganese-54	U	-1.08	+/-4.08	7.41		pCi/L						
Mercury-203	U	-4.07	+/-4.30	7.25		pCi/L						
Neodymium-147	U	0.876	+/-56.3	90.0		pCi/L						
Neptunium-239	U	-22.1	+/-35.4	58.4		pCi/L						
Niobium-94	U	1.48	+/-3.58	7.04		pCi/L						
Niobium-95	U	1.35	+/-4.69	8.61		pCi/L						
Potassium-40	U	40.0	+/-58.8	52.8		pCi/L						
Promethium-144	U	2.51	+/-4.58	8.01		pCi/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.61	+/-4.69	9.29	pCi/L
Radium-228	U	6.53	+/-17.3	32.3	pCi/L
Ruthenium-106	U	11.8	+/-32.5	61.6	pCi/L
Silver-110m	U	0.0981	+/-3.37	5.72	pCi/L
Sodium-22	U	1.65	+/-3.83	7.94	pCi/L
Thallium-208	U	4.82	+/-6.41	6.87	pCi/L
Thorium-230	U	1650	+/-1950	3610	pCi/L
Thorium-234	U	-99.5	+/-314	522	pCi/L
Tin-113	U	-4.35	+/-5.03	8.34	pCi/L
Uranium-235	U	-24.7	+/-32.7	44.9	pCi/L
Uranium-238	U	-99.5	+/-314	522	pCi/L
Yttrium-88	U	0.389	+/-4.25	8.84	pCi/L
Zinc-65	U	2.86	+/-7.96	14.5	pCi/L
Zirconium-95	U	-0.589	+/-9.37	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	6.81	+/-4.07	4.82	5.00	pCi/L	JXH3	11/04/14	1726	1430824	2
Beta	77.5	+/-6.43	4.76	5.00	pCi/L					
Alpha	10.5	+/-4.67	4.97	5.00	pCi/L	JXH3	11/05/14	1553	1430824	3
Beta	82.3	+/-5.86	3.42	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	143	+/-124	207	300	pCi/L	GXR1	11/07/14	0522	1434030	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358770012	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358770013  
Matrix: Water  
Collect Date: 06-OCT-14 13:50  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	33.9	+/-24.2	39.7		pCi/L		MJH1	10/20/14	1152 1428415	1
Americium-241	U	-17.9	+/-27.4	42.2		pCi/L					
Antimony-124	U	8.35	+/-8.92	21.3		pCi/L					
Antimony-125	U	-1.1	+/-9.42	17.0		pCi/L					
Barium-133	U	0.412	+/-4.96	8.08		pCi/L					
Barium-140	U	-5.15	+/-8.54	15.0		pCi/L					
Beryllium-7	U	3.44	+/-33.4	61.5		pCi/L					
Bismuth-212	U	-13.8	+/-57.6	99.3		pCi/L					
Bismuth-214	U	-3.17	+/-10.2	16.5		pCi/L					
Cerium-139	U	-0.872	+/-3.50	5.97		pCi/L					
Cerium-141	U	5.40	+/-10.3	11.4		pCi/L					
Cerium-144	U	7.55	+/-21.4	38.7		pCi/L					
Cesium-134	U	0.375	+/-3.71	7.20		pCi/L					
Cesium-136	U	-2.08	+/-9.94	18.2		pCi/L					
Cesium-137	U	-2.16	+/-3.89	6.94	10.0	pCi/L					
Chromium-51	U	12.7	+/-38.5	72.5		pCi/L					
Cobalt-56	U	0.934	+/-4.28	8.25		pCi/L					
Cobalt-57	U	0.135	+/-2.97	5.26		pCi/L					
Cobalt-58	U	-0.231	+/-3.92	7.39		pCi/L					
Cobalt-60	U	3.04	+/-3.63	8.76		pCi/L					
Europium-152	U	8.36	+/-12.0	20.9		pCi/L					
Europium-154	U	4.71	+/-11.1	22.6		pCi/L					
Europium-155	U	4.44	+/-17.6	23.2		pCi/L					
Iridium-192	U	-2.65	+/-3.52	6.06		pCi/L					
Iron-59	U	0.684	+/-8.23	15.8		pCi/L					
Lead-210	U	-396	+/-958	1500		pCi/L					
Lead-212	U	3.93	+/-10.1	14.6		pCi/L					
Lead-214	U	15.1	+/-16.1	16.7		pCi/L					
Manganese-54	U	-0.996	+/-4.06	7.39		pCi/L					
Mercury-203	U	-2.08	+/-3.94	6.97		pCi/L					
Neodymium-147	U	-4.58	+/-51.6	93.5		pCi/L					
Neptunium-239	U	2.41	+/-30.6	54.5		pCi/L					
Niobium-94	U	4.26	+/-3.78	7.83		pCi/L					
Niobium-95	U	-0.765	+/-5.01	8.58		pCi/L					
Potassium-40	U	2.44	+/-55.0	67.7		pCi/L					
Promethium-144	U	1.81	+/-4.22	7.35		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358770013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	7.01	+/-7.19	9.40	pCi/L
Radium-228	U	33.9	+/-24.2	39.7	pCi/L
Ruthenium-106	U	12.6	+/-36.0	67.2	pCi/L
Silver-110m	U	1.69	+/-3.41	6.86	pCi/L
Sodium-22	U	1.74	+/-3.92	8.01	pCi/L
Thallium-208	U	2.84	+/-6.09	6.42	pCi/L
Thorium-230	U	1570	+/-2420	2620	pCi/L
Thorium-234	U	3.81	+/-298	342	pCi/L
Tin-113	U	0.889	+/-4.56	8.51	pCi/L
Uranium-235	U	17.7	+/-33.6	43.4	pCi/L
Uranium-238	U	3.81	+/-298	342	pCi/L
Yttrium-88	U	1.19	+/-4.43	9.34	pCi/L
Zinc-65	U	-6.94	+/-8.97	14.8	pCi/L
Zirconium-95	U	-5.97	+/-7.18	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.38	+/-2.19	4.81	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	U	1.92	+/-2.71	4.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-25.6	+/-115	204	300	pCi/L	GXR1	11/07/14	0540	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	358770014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 09:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.3	+/-17.6	30.6		pCi/L		MJH1	10/20/14	1153 1428415	1
Americium-241	U	-10.6	+/-39.3	56.7		pCi/L					
Antimony-124	U	6.42	+/-12.3	26.5		pCi/L					
Antimony-125	U	-12.2	+/-12.1	19.6		pCi/L					
Barium-133	U	-1.06	+/-6.10	9.45		pCi/L					
Barium-140	U	0.969	+/-11.2	22.4		pCi/L					
Beryllium-7	U	19.7	+/-38.0	72.5		pCi/L					
Bismuth-212	U	-20.6	+/-50.3	91.0		pCi/L					
Bismuth-214	U	3.41	+/-12.9	20.2		pCi/L					
Cerium-139	U	-0.257	+/-3.85	6.57		pCi/L					
Cerium-141	U	-2.09	+/-7.68	13.0		pCi/L					
Cerium-144	U	5.26	+/-26.7	46.7		pCi/L					
Cesium-134	U	-0.49	+/-6.15	9.82		pCi/L					
Cesium-136	U	-2.3	+/-11.2	20.5		pCi/L					
Cesium-137	U	-1.2	+/-3.96	7.28	10.0	pCi/L					
Chromium-51	U	12.6	+/-46.6	86.0		pCi/L					
Cobalt-56	U	0.0639	+/-5.52	9.00		pCi/L					
Cobalt-57	U	0.390	+/-3.30	5.78		pCi/L					
Cobalt-58	U	4.05	+/-4.35	7.91		pCi/L					
Cobalt-60	U	0.517	+/-4.15	8.49		pCi/L					
Europium-152	U	7.18	+/-14.2	22.3		pCi/L					
Europium-154	U	3.54	+/-9.68	21.3		pCi/L					
Europium-155	U	2.28	+/-13.7	24.2		pCi/L					
Iridium-192	U	0.311	+/-4.42	8.04		pCi/L					
Iron-59	U	5.47	+/-11.3	22.3		pCi/L					
Lead-210	U	333	+/-1410	2370		pCi/L					
Lead-212	U	2.38	+/-9.67	14.7		pCi/L					
Lead-214	U	1.35	+/-13.0	19.5		pCi/L					
Manganese-54	U	2.36	+/-4.09	8.27		pCi/L					
Mercury-203	U	-3.41	+/-4.62	7.91		pCi/L					
Neodymium-147	U	28.7	+/-66.5	114		pCi/L					
Neptunium-239	U	6.77	+/-35.8	56.8		pCi/L					
Niobium-94	U	-0.204	+/-3.83	7.19		pCi/L					
Niobium-95	U	2.73	+/-5.10	10.1		pCi/L					
Potassium-40	U	3.22	+/-65.9	116		pCi/L					
Promethium-144	U	2.31	+/-4.23	8.37		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	358770014	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.49	+/-5.15	9.75	pCi/L
Radium-228	U	-3.3	+/-17.6	30.6	pCi/L
Ruthenium-106	U	21.3	+/-39.1	77.5	pCi/L
Silver-110m	U	-0.307	+/-3.67	6.94	pCi/L
Sodium-22	U	1.34	+/-3.44	7.58	pCi/L
Thallium-208	U	1.09	+/-7.51	8.03	pCi/L
Thorium-230	U	976	+/-2160	3560	pCi/L
Thorium-234	U	118	+/-315	477	pCi/L
Tin-113	U	-0.886	+/-5.30	9.45	pCi/L
Uranium-235	U	-10.4	+/-26.2	43.8	pCi/L
Uranium-238	U	118	+/-315	477	pCi/L
Yttrium-88	U	2.11	+/-5.37	11.5	pCi/L
Zinc-65	U	0.115	+/-9.97	18.6	pCi/L
Zirconium-95	U	-3.29	+/-7.52	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.0305	+/-2.20	4.75	5.00	pCi/L	JXH3	11/04/14	1819	1430824	2
Beta	U	2.49	+/-3.11	5.27	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-10.5	+/-121	212	300	pCi/L	GXR1	11/07/14	0557	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358770015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.24	+/-18.0	31.7		pCi/L		MJH1	10/23/14	1127 1428415	1
Americium-241	U	4.28	+/-24.4	39.5		pCi/L					
Antimony-124	U	14.8	+/-12.3	28.2		pCi/L					
Antimony-125	U	14.6	+/-13.6	26.1		pCi/L					
Barium-133	U	-3.23	+/-6.98	10.5		pCi/L					
Barium-140	U	5.65	+/-10.8	23.5		pCi/L					
Beryllium-7	U	36.7	+/-47.3	90.0		pCi/L					
Bismuth-212	U	-63.9	+/-79.9	126		pCi/L					
Bismuth-214	U	5.32	+/-13.7	18.9		pCi/L					
Cerium-139	U	1.35	+/-4.25	7.54		pCi/L					
Cerium-141	U	4.98	+/-14.4	15.0		pCi/L					
Cerium-144	U	5.59	+/-31.7	49.6		pCi/L					
Cesium-134	U	-1.78	+/-5.10	7.86		pCi/L					
Cesium-136	U	-3.87	+/-17.9	27.5		pCi/L					
Cesium-137	U	-2.72	+/-5.97	9.25	10.0	pCi/L					
Chromium-51	U	-2.76	+/-58.0	105		pCi/L					
Cobalt-56	U	1.54	+/-6.21	10.3		pCi/L					
Cobalt-57	U	1.58	+/-3.70	6.65		pCi/L					
Cobalt-58	U	-2.11	+/-5.34	9.58		pCi/L					
Cobalt-60	U	0.945	+/-4.08	8.13		pCi/L					
Europium-152	U	-1.07	+/-14.1	25.4		pCi/L					
Europium-154	U	0.0484	+/-10.6	20.6		pCi/L					
Europium-155	U	2.54	+/-15.1	27.0		pCi/L					
Iridium-192	U	2.81	+/-5.01	9.40		pCi/L					
Iron-59	U	-5.5	+/-10.4	18.3		pCi/L					
Lead-210	U	125	+/-896	1020		pCi/L					
Lead-212	U	5.80	+/-9.77	15.7		pCi/L					
Lead-214	U	10.4	+/-11.8	19.0		pCi/L					
Manganese-54	U	5.22	+/-5.17	9.50		pCi/L					
Mercury-203	U	4.07	+/-6.42	10.2		pCi/L					
Neodymium-147	U	-50.1	+/-86.9	144		pCi/L					
Neptunium-239	U	-13	+/-38.8	67.3		pCi/L					
Niobium-94	U	5.20	+/-4.49	8.86		pCi/L					
Niobium-95	U	-0.98	+/-5.56	9.73		pCi/L					
Potassium-40	U	-27.7	+/-57.0	102		pCi/L					
Promethium-144	U	-1.53	+/-5.54	8.74		pCi/L					



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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358770015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	6.53	+/-5.81	11.4	pCi/L
Radium-228	U	-9.24	+/-18.0	31.7	pCi/L
Ruthenium-106	U	10.1	+/-45.3	82.6	pCi/L
Silver-110m	U	-3.18	+/-4.70	7.87	pCi/L
Sodium-22	U	-0.789	+/-3.91	7.27	pCi/L
Thallium-208	U	-3.68	+/-6.62	9.48	pCi/L
Thorium-230	U	376	+/-1750	2720	pCi/L
Thorium-234	U	-40	+/-207	364	pCi/L
Tin-113	U	1.15	+/-6.41	11.7	pCi/L
Uranium-235	U	15.2	+/-43.9	50.3	pCi/L
Uranium-238	U	-40	+/-207	364	pCi/L
Yttrium-88	U	3.06	+/-4.27	9.88	pCi/L
Zinc-65	U	-10.2	+/-10.2	16.5	pCi/L
Zirconium-95	U	-6.85	+/-9.29	15.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.323	+/-2.15	4.71	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		9.21	+/-3.19	4.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	17.2	+/-124	215	300	pCi/L	GXR1	11/07/14	0614	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	358770016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:45		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.81	+/-16.5	30.0		pCi/L		MJH1	10/20/14	1153 1428415	1
Americium-241	U	-6.99	+/-35.4	57.9		pCi/L					
Antimony-124	U	2.84	+/-20.0	33.8		pCi/L					
Antimony-125	U	9.64	+/-11.6	22.7		pCi/L					
Barium-133	U	0.584	+/-6.00	9.67		pCi/L					
Barium-140	U	-6.45	+/-9.09	15.7		pCi/L					
Beryllium-7	U	-3.07	+/-40.2	71.7		pCi/L					
Bismuth-212	U	39.0	+/-62.2	114		pCi/L					
Bismuth-214	U	14.8	+/-15.1	21.9		pCi/L					
Cerium-139	U	-1.7	+/-3.77	6.34		pCi/L					
Cerium-141	U	-2.11	+/-8.80	13.8		pCi/L					
Cerium-144	U	6.67	+/-23.0	41.7		pCi/L					
Cesium-134	U	-1.86	+/-4.69	8.27		pCi/L					
Cesium-136	U	-15.6	+/-11.5	17.1		pCi/L					
Cesium-137	U	0.131	+/-4.80	8.77	10.0	pCi/L					
Chromium-51	U	-15.3	+/-52.0	88.8		pCi/L					
Cobalt-56	U	1.74	+/-6.14	11.2		pCi/L					
Cobalt-57	U	0.0868	+/-3.68	5.84		pCi/L					
Cobalt-58	U	-0.305	+/-4.26	7.95		pCi/L					
Cobalt-60	U	2.23	+/-5.69	11.4		pCi/L					
Europium-152	U	-7.72	+/-13.8	23.6		pCi/L					
Europium-154	U	1.47	+/-14.0	27.5		pCi/L					
Europium-155	U	-6.31	+/-14.4	22.8		pCi/L					
Iridium-192	U	-0.717	+/-4.59	8.23		pCi/L					
Iron-59	U	1.69	+/-8.42	17.3		pCi/L					
Lead-210	U	843	+/-1660	2900		pCi/L					
Lead-212	U	12.6	+/-11.6	16.6		pCi/L					
Lead-214	U	4.64	+/-14.3	21.6		pCi/L					
Manganese-54	U	2.88	+/-4.54	9.11		pCi/L					
Mercury-203	U	-1.92	+/-5.16	8.42		pCi/L					
Neodymium-147	U	-35.3	+/-69.1	119		pCi/L					
Neptunium-239	U	-28.3	+/-40.6	58.0		pCi/L					
Niobium-94	U	0.236	+/-4.70	8.70		pCi/L					
Niobium-95	U	-0.333	+/-5.65	10.3		pCi/L					
Potassium-40	U	27.2	+/-76.6	97.5		pCi/L					
Promethium-144	U	2.76	+/-5.05	8.83		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27

Sample ID: 358770016

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.31	+/-4.77	8.38	pCi/L
Radium-228	U	-7.81	+/-16.5	30.0	pCi/L
Ruthenium-106	U	4.03	+/-43.6	81.8	pCi/L
Silver-110m	U	0.455	+/-4.34	8.22	pCi/L
Sodium-22	U	-0.529	+/-5.14	9.70	pCi/L
Thallium-208	U	-3.64	+/-5.72	9.39	pCi/L
Thorium-230	U	-324	+/-2050	3330	pCi/L
Thorium-234	U	97.9	+/-584	428	pCi/L
Tin-113	U	5.45	+/-6.35	12.2	pCi/L
Uranium-235	U	4.35	+/-28.2	45.6	pCi/L
Uranium-238	U	97.9	+/-584	428	pCi/L
Yttrium-88	U	-0.427	+/-4.87	9.87	pCi/L
Zinc-65	U	2.52	+/-8.56	17.6	pCi/L
Zirconium-95	U	2.04	+/-8.39	16.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.17	+/-2.66	4.43	5.00	pCi/L	JXH3	11/04/14	1818	1430824	2
Beta	U	5.06	+/-3.36	5.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	6.07	+/-118	206	300	pCi/L	GXR1	11/07/14	0631	1434030	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358770017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.1	+/-17.9	30.8		pCi/L		MJH1	10/23/14	1125 1428415	1
Americium-241	U	-9.41	+/-34.8	60.4		pCi/L					
Antimony-124	U	0.317	+/-10.2	20.8		pCi/L					
Antimony-125	U	-0.385	+/-10.8	19.4		pCi/L					
Barium-133	U	-2.27	+/-5.44	9.44		pCi/L					
Barium-140	U	0.450	+/-10.2	20.7		pCi/L					
Beryllium-7	U	19.9	+/-36.0	68.9		pCi/L					
Bismuth-212	U	-10	+/-55.9	95.9		pCi/L					
Bismuth-214	U	2.12	+/-12.4	19.5		pCi/L					
Cerium-139	U	-0.0862	+/-4.32	6.51		pCi/L					
Cerium-141	U	1.20	+/-11.0	14.9		pCi/L					
Cerium-144	U	3.11	+/-25.3	43.8		pCi/L					
Cesium-134	U	1.81	+/-4.49	8.83		pCi/L					
Cesium-136	U	-5.93	+/-10.8	18.8		pCi/L					
Cesium-137	U	-2.76	+/-3.81	6.66	10.0	pCi/L					
Chromium-51	U	3.27	+/-49.7	79.7		pCi/L					
Cobalt-56	U	-0.914	+/-4.37	8.03		pCi/L					
Cobalt-57	U	-1.43	+/-3.39	5.67		pCi/L					
Cobalt-58	U	-1.25	+/-4.28	7.81		pCi/L					
Cobalt-60	U	-0.626	+/-3.06	5.83		pCi/L					
Europium-152	U	8.62	+/-14.7	20.8		pCi/L					
Europium-154	U	0.125	+/-11.0	21.2		pCi/L					
Europium-155	U	-1.35	+/-14.6	25.0		pCi/L					
Iridium-192	U	-0.963	+/-4.40	7.81		pCi/L					
Iron-59	U	-3.26	+/-8.60	15.4		pCi/L					
Lead-210	U	547	+/-1470	2690		pCi/L					
Lead-212	U	11.4	+/-11.8	13.2		pCi/L					
Lead-214	U	-3.68	+/-11.0	17.5		pCi/L					
Manganese-54	U	-0.0664	+/-4.17	7.79		pCi/L					
Mercury-203	U	-0.62	+/-4.70	8.42		pCi/L					
Neodymium-147	U	20.8	+/-69.4	129		pCi/L					
Neptunium-239	U	-28.7	+/-35.2	57.2		pCi/L					
Niobium-94	U	1.05	+/-3.63	7.04		pCi/L					
Niobium-95	U	1.83	+/-4.42	8.70		pCi/L					
Potassium-40	U	45.4	+/-65.0	72.9		pCi/L					
Promethium-144	U	-1.85	+/-3.62	6.46		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 28

Sample ID: 358770017

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.40	+/-4.88	9.05	pCi/L
Radium-228	U	-6.1	+/-17.9	30.8	pCi/L
Ruthenium-106	U	20.1	+/-34.4	66.3	pCi/L
Silver-110m	U	2.30	+/-3.43	7.02	pCi/L
Sodium-22	U	-0.792	+/-4.05	7.48	pCi/L
Thallium-208	U	5.88	+/-5.25	6.42	pCi/L
Thorium-230	U	837	+/-2340	3760	pCi/L
Thorium-234	U	-18.3	+/-328	510	pCi/L
Tin-113	U	-1.61	+/-5.48	9.61	pCi/L
Uranium-235	U	3.75	+/-34.4	41.8	pCi/L
Uranium-238	U	-18.3	+/-328	510	pCi/L
Yttrium-88	U	2.51	+/-4.57	10.2	pCi/L
Zinc-65	U	-12	+/-9.43	14.2	pCi/L
Zirconium-95	U	-5.26	+/-7.39	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	2.66	+/-4.03	5.90	5.00	pCi/L	JXH3	11/04/14	1857	1430824	2
Beta		90.0	+/-4.39	3.23	5.00	pCi/L					
Alpha	U	0.808	+/-6.17	11.0	5.00	pCi/L	JXH3	11/05/14	1935	1430824	3
Beta		78.7	+/-4.75	5.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	8.57	+/-122	213	300	pCi/L	MYM1	11/02/14	1158	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358770017	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358770018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:11		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.26	+/-25.7	33.5		pCi/L		MJH1	10/23/14	1125 1428415	1
Americium-241	U	-9.36	+/-24.1	42.7		pCi/L					
Antimony-124	U	6.09	+/-10.3	22.6		pCi/L					
Antimony-125	U	6.23	+/-9.87	19.1		pCi/L					
Barium-133	U	0.175	+/-3.91	6.48		pCi/L					
Barium-140	U	5.71	+/-10.8	21.3		pCi/L					
Beryllium-7	U	9.30	+/-33.2	56.4		pCi/L					
Bismuth-212	U	-18.6	+/-59.4	102		pCi/L					
Bismuth-214	U	9.91	+/-16.7	19.2		pCi/L					
Cerium-139	U	-1.89	+/-3.18	5.30		pCi/L					
Cerium-141	U	3.28	+/-10.4	11.7		pCi/L					
Cerium-144	U	0.367	+/-22.0	38.8		pCi/L					
Cesium-134	U	-1.47	+/-3.86	7.00		pCi/L					
Cesium-136	U	0.315	+/-10.9	20.8		pCi/L					
Cesium-137	U	2.82	+/-3.74	7.67	10.0	pCi/L					
Chromium-51	U	23.7	+/-42.5	81.1		pCi/L					
Cobalt-56	U	-0.39	+/-4.17	7.80		pCi/L					
Cobalt-57	U	-1.37	+/-3.04	5.19		pCi/L					
Cobalt-58	U	1.97	+/-4.15	8.29		pCi/L					
Cobalt-60	U	1.13	+/-3.52	7.45		pCi/L					
Europium-152	U	4.88	+/-9.21	17.9		pCi/L					
Europium-154	U	-3.96	+/-10.9	19.3		pCi/L					
Europium-155	U	4.62	+/-12.1	22.1		pCi/L					
Iridium-192	U	1.04	+/-4.02	7.49		pCi/L					
Iron-59	U	-1.59	+/-9.19	16.8		pCi/L					
Lead-210	U	379	+/-994	1660		pCi/L					
Lead-212	U	4.63	+/-10.8	11.6		pCi/L					
Lead-214	U	8.02	+/-11.3	16.1		pCi/L					
Manganese-54	U	-1.15	+/-3.72	6.76		pCi/L					
Mercury-203	U	3.07	+/-3.94	7.69		pCi/L					
Neodymium-147	U	86.5	+/-135	114		pCi/L					
Neptunium-239	U	-17.1	+/-33.0	56.3		pCi/L					
Niobium-94	U	0.321	+/-3.50	6.68		pCi/L					
Niobium-95	U	-3.4	+/-4.71	7.43		pCi/L					
Potassium-40	UI	0.00	+/-60.9	68.5		pCi/L					
Promethium-144	U	1.09	+/-3.83	7.40		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358770018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.61	+/-4.25	8.09	pCi/L
Radium-228	U	2.26	+/-25.7	33.5	pCi/L
Ruthenium-106	U	-1.71	+/-31.4	56.7	pCi/L
Silver-110m	U	-0.448	+/-3.58	6.73	pCi/L
Sodium-22	U	-1.48	+/-3.82	6.76	pCi/L
Thallium-208	U	0.482	+/-5.05	8.85	pCi/L
Thorium-230	U	-339	+/-1610	2680	pCi/L
Thorium-234	U	-89.3	+/-261	455	pCi/L
Tin-113	U	1.83	+/-4.40	8.43	pCi/L
Uranium-235	U	10.2	+/-32.6	38.4	pCi/L
Uranium-238	U	-89.3	+/-261	455	pCi/L
Yttrium-88	U	4.07	+/-4.04	9.88	pCi/L
Zinc-65	U	1.51	+/-8.49	16.4	pCi/L
Zirconium-95	U	1.02	+/-7.40	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.54	+/-2.83	5.00	5.00	pCi/L	JXH3	11/04/14	1724	1430824	2
Beta		10.8	+/-2.43	2.90	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	49.1	+/-120	206	300	pCi/L	MYM1	11/02/14	1215	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 19:31		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.1	+/-18.6	30.5		pCi/L		MJH1	10/23/14	1126 1428415	1
Americium-241	U	-4.32	+/-37.9	60.9		pCi/L					
Antimony-124	U	-0.468	+/-12.2	24.0		pCi/L					
Antimony-125	U	-2.81	+/-11.6	20.5		pCi/L					
Barium-133	U	8.31	+/-11.0	9.71		pCi/L					
Barium-140	U	-5.46	+/-12.5	22.5		pCi/L					
Beryllium-7	U	18.1	+/-39.7	75.0		pCi/L					
Bismuth-212	U	0.444	+/-60.7	108		pCi/L					
Bismuth-214	U	11.2	+/-15.2	21.5		pCi/L					
Cerium-139	U	-2.21	+/-3.61	5.91		pCi/L					
Cerium-141	U	2.23	+/-8.09	14.2		pCi/L					
Cerium-144	U	23.3	+/-26.9	49.0		pCi/L					
Cesium-134	U	5.77	+/-4.35	9.60		pCi/L					
Cesium-136	U	6.17	+/-12.1	24.6		pCi/L					
Cesium-137	U	2.36	+/-4.02	8.16	10.0	pCi/L					
Chromium-51	U	-23.9	+/-47.0	81.6		pCi/L					
Cobalt-56	U	-2.1	+/-5.21	9.25		pCi/L					
Cobalt-57	U	1.92	+/-3.23	5.86		pCi/L					
Cobalt-58	U	0.359	+/-4.47	8.55		pCi/L					
Cobalt-60	U	-2.22	+/-3.96	6.69		pCi/L					
Europium-152	U	-3.26	+/-11.1	19.6		pCi/L					
Europium-154	U	3.88	+/-12.7	26.3		pCi/L					
Europium-155	U	-0.367	+/-13.9	24.3		pCi/L					
Iridium-192	U	-2.47	+/-4.48	7.75		pCi/L					
Iron-59	U	2.49	+/-7.73	16.0		pCi/L					
Lead-210	U	585	+/-1410	2400		pCi/L					
Lead-212	U	2.89	+/-9.28	15.4		pCi/L					
Lead-214	U	-3.24	+/-10.7	17.1		pCi/L					
Manganese-54	U	-1.39	+/-3.81	6.88		pCi/L					
Mercury-203	U	-0.104	+/-4.46	8.12		pCi/L					
Neodymium-147	U	-27.8	+/-59.2	101		pCi/L					
Neptunium-239	U	-1.07	+/-34.0	59.0		pCi/L					
Niobium-94	U	-2.4	+/-3.73	6.52		pCi/L					
Niobium-95	U	7.63	+/-4.31	9.86		pCi/L					
Potassium-40	U	33.7	+/-57.2	83.0		pCi/L					
Promethium-144	U	-0.0923	+/-4.37	8.15		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.94	+/-4.95	9.34	pCi/L
Radium-228	U	-11.1	+/-18.6	30.5	pCi/L
Ruthenium-106	U	-16.6	+/-34.3	61.8	pCi/L
Silver-110m	U	1.80	+/-3.56	7.24	pCi/L
Sodium-22	U	1.37	+/-4.48	9.27	pCi/L
Thallium-208		8.30	+/-6.23	8.04	pCi/L
Thorium-230	U	638	+/-1890	3430	pCi/L
Thorium-234	U	-183	+/-291	493	pCi/L
Tin-113	U	1.93	+/-5.74	10.7	pCi/L
Uranium-235	U	0.375	+/-26.4	45.3	pCi/L
Uranium-238	U	-183	+/-291	493	pCi/L
Yttrium-88	U	-3.53	+/-5.39	9.16	pCi/L
Zinc-65	U	-3.94	+/-9.94	17.4	pCi/L
Zirconium-95	U	5.63	+/-6.89	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	44.6	+/-7.77	4.99	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta	39.3	+/-4.33	3.02	5.00	pCi/L					
Alpha	38.3	+/-7.51	4.77	5.00	pCi/L	JXH3	11/07/14	0850	1430824	3
Beta	46.1	+/-4.83	3.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	30.9	+/-123	213	300	pCi/L	MYM1	11/02/14	1231	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358770019	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	358770020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:37		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	22.2	+/-20.9	42.0		pCi/L		MJH1	10/23/14	1126 1428415	1
Americium-241	U	2.83	+/-7.57	12.0		pCi/L					
Antimony-124	U	-0.423	+/-10.7	21.2		pCi/L					
Antimony-125	U	-2.69	+/-12.9	22.9		pCi/L					
Barium-133	U	5.63	+/-8.74	9.84		pCi/L					
Barium-140	U	0.371	+/-11.9	23.4		pCi/L					
Beryllium-7	U	-18.2	+/-52.1	80.9		pCi/L					
Bismuth-212	U	51.7	+/-71.9	137		pCi/L					
Bismuth-214	UI	0.00	+/-20.2	17.5		pCi/L					
Cerium-139	U	-1.6	+/-4.09	6.02		pCi/L					
Cerium-141	U	8.21	+/-7.63	14.0		pCi/L					
Cerium-144	U	-5.48	+/-22.9	39.8		pCi/L					
Cesium-134	U	-1.98	+/-5.52	9.91		pCi/L					
Cesium-136	U	25.8	+/-16.7	26.4		pCi/L					
Cesium-137	U	0.763	+/-5.19	9.42	10.0	pCi/L					
Chromium-51	U	-44.3	+/-59.7	86.9		pCi/L					
Cobalt-56	U	-3.55	+/-5.57	9.69		pCi/L					
Cobalt-57	U	3.47	+/-2.87	5.33		pCi/L					
Cobalt-58	U	-3.78	+/-5.26	9.11		pCi/L					
Cobalt-60	U	-7.88	+/-6.76	10.5		pCi/L					
Europium-152	U	-22.1	+/-14.6	20.5		pCi/L					
Europium-154	U	13.7	+/-17.8	29.4		pCi/L					
Europium-155	U	-4.31	+/-14.2	20.9		pCi/L					
Iridium-192	U	4.12	+/-4.54	8.64		pCi/L					
Iron-59	U	0.780	+/-11.9	22.2		pCi/L					
Lead-210	U	-30.9	+/-98.0	161		pCi/L					
Lead-212	U	1.97	+/-13.2	13.4		pCi/L					
Lead-214	U	12.3	+/-19.9	22.1		pCi/L					
Manganese-54	U	0.388	+/-5.82	10.7		pCi/L					
Mercury-203	U	-2.49	+/-5.21	8.74		pCi/L					
Neodymium-147	U	-39.4	+/-79.5	137		pCi/L					
Neptunium-239	U	-18.4	+/-30.3	51.8		pCi/L					
Niobium-94	U	-2.67	+/-5.36	9.10		pCi/L					
Niobium-95	U	1.48	+/-6.09	11.1		pCi/L					
Potassium-40	U	-27.4	+/-73.2	120		pCi/L					
Promethium-144	U	-1.76	+/-6.88	9.41		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	358770020	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.65	+/-5.63	9.93	pCi/L
Radium-228	U	22.2	+/-20.9	42.0	pCi/L
Ruthenium-106	U	26.0	+/-45.6	85.5	pCi/L
Silver-110m	U	0.676	+/-5.04	9.12	pCi/L
Sodium-22	U	4.62	+/-6.24	10.4	pCi/L
Thallium-208	U	1.13	+/-8.51	9.42	pCi/L
Thorium-230	U	-432	+/-811	1210	pCi/L
Thorium-234	U	52.1	+/-139	183	pCi/L
Tin-113	U	7.93	+/-6.33	9.96	pCi/L
Uranium-235	U	-15.2	+/-28.1	44.1	pCi/L
Uranium-238	U	52.1	+/-139	183	pCi/L
Yttrium-88	U	5.23	+/-5.57	12.6	pCi/L
Zinc-65	U	-0.226	+/-10.9	20.2	pCi/L
Zirconium-95	U	-15	+/-11.4	16.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.51	+/-3.22	4.76	5.00	pCi/L	JXH3	11/04/14	1723	1430824	2
Beta		232	+/-9.00	2.66	5.00	pCi/L					
Alpha	U	-0.566	+/-3.18	4.82	5.00	pCi/L	JXH3	11/06/14	0957	1430824	3
Beta		222	+/-9.10	4.71	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	320	+/-131	206	300	pCi/L	MYM1	11/02/14	1248	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 358770020

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	358770021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:36		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-22.3	+/-18.1	27.8		pCi/L		MJH1	10/24/14	0635 1428419	1
Americium-241	U	10.3	+/-24.2	39.3		pCi/L					
Antimony-124	U	-9.23	+/-10.4	17.2		pCi/L					
Antimony-125	U	9.77	+/-18.8	20.7		pCi/L					
Barium-133	U	0.0466	+/-5.99	9.20		pCi/L					
Barium-140	U	3.76	+/-11.4	23.7		pCi/L					
Beryllium-7	U	34.6	+/-45.5	78.7		pCi/L					
Bismuth-212	U	-21.9	+/-60.4	105		pCi/L					
Bismuth-214	UI	0.00	+/-18.1	15.3		pCi/L					
Cerium-139	U	-0.603	+/-3.87	6.91		pCi/L					
Cerium-141	U	-6.68	+/-9.56	14.1		pCi/L					
Cerium-144	U	16.9	+/-27.5	45.9		pCi/L					
Cesium-134	U	4.74	+/-4.24	7.90		pCi/L					
Cesium-136	U	-6.19	+/-13.1	23.4		pCi/L					
Cesium-137	U	-1.31	+/-4.38	7.73	10.0	pCi/L					
Chromium-51	U	10.4	+/-48.8	87.2		pCi/L					
Cobalt-56	U	-0.521	+/-4.32	7.76		pCi/L					
Cobalt-57	U	-1.67	+/-3.30	5.47		pCi/L					
Cobalt-58	U	0.161	+/-4.05	7.47		pCi/L					
Cobalt-60	U	1.95	+/-4.91	9.61		pCi/L					
Europium-152	U	-2.24	+/-11.9	20.6		pCi/L					
Europium-154	U	2.49	+/-13.5	25.8		pCi/L					
Europium-155	U	-1.67	+/-12.6	21.5		pCi/L					
Iridium-192	U	1.34	+/-4.69	8.40		pCi/L					
Iron-59	U	-2.02	+/-10.8	19.8		pCi/L					
Lead-210	U	695	+/-760	1250		pCi/L					
Lead-212	U	-1.1	+/-9.43	15.4		pCi/L					
Lead-214		21.0	+/-16.2	15.9		pCi/L					
Manganese-54	U	1.85	+/-4.59	8.56		pCi/L					
Mercury-203	U	-3.63	+/-5.15	8.70		pCi/L					
Neodymium-147	U	-40.4	+/-76.1	134		pCi/L					
Neptunium-239	U	-7.87	+/-33.5	56.5		pCi/L					
Niobium-94	U	-2.49	+/-3.92	6.67		pCi/L					
Niobium-95	U	1.86	+/-4.66	7.89		pCi/L					
Potassium-40	U	-51.7	+/-73.7	112		pCi/L					
Promethium-144	U	4.31	+/-3.94	7.87		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	358770021	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.935	+/-5.09	9.24	pCi/L
Radium-228	U	-22.3	+/-18.1	27.8	pCi/L
Ruthenium-106	U	-12.8	+/-37.6	66.5	pCi/L
Silver-110m	U	-0.878	+/-4.02	7.18	pCi/L
Sodium-22	U	1.02	+/-4.79	9.19	pCi/L
Thallium-208	U	-3.53	+/-6.30	9.68	pCi/L
Thorium-230	U	791	+/-1510	2460	pCi/L
Thorium-234	U	14.8	+/-281	350	pCi/L
Tin-113	U	-0.447	+/-5.39	9.40	pCi/L
Uranium-235	U	-18.9	+/-29.4	43.8	pCi/L
Uranium-238	U	14.8	+/-281	350	pCi/L
Yttrium-88	U	0.0457	+/-5.21	10.2	pCi/L
Zinc-65	U	-9.23	+/-11.5	15.8	pCi/L
Zirconium-95	U	4.91	+/-7.97	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.325	+/-2.02	4.68	5.00	pCi/L	JXH3	11/03/14	1650	1430825	2
Beta		5.26	+/-2.71	3.75	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-36.7	+/-118	209	300	pCi/L	MYM1	11/02/14	1305	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	358770022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 08:47		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-5.87	+/-21.4	31.9		pCi/L		MJH1	10/24/14	0635	1428419	1
Americium-241	U	4.12	+/-12.1	19.5		pCi/L						
Antimony-124	U	4.50	+/-8.02	17.4		pCi/L						
Antimony-125	U	7.57	+/-8.73	17.0		pCi/L						
Barium-133	U	-6.03	+/-6.56	8.07		pCi/L						
Barium-140	U	3.57	+/-11.1	21.9		pCi/L						
Beryllium-7	U	14.0	+/-35.6	66.3		pCi/L						
Bismuth-212	U	-17.3	+/-50.4	86.7		pCi/L						
Bismuth-214		28.2	+/-13.2	14.9		pCi/L						
Cerium-139	U	-2.19	+/-3.03	5.24		pCi/L						
Cerium-141	U	3.86	+/-7.33	12.1		pCi/L						
Cerium-144	U	13.9	+/-21.8	37.9		pCi/L						
Cesium-134	U	0.457	+/-3.95	7.43		pCi/L						
Cesium-136	U	-0.389	+/-10.5	19.3		pCi/L						
Cesium-137	U	2.75	+/-4.13	7.77	10.0	pCi/L						
Chromium-51	U	14.1	+/-42.7	76.0		pCi/L						
Cobalt-56	U	1.90	+/-4.47	8.53		pCi/L						
Cobalt-57	U	0.104	+/-2.71	4.59		pCi/L						
Cobalt-58	U	-2.06	+/-4.21	7.44		pCi/L						
Cobalt-60	U	-1.24	+/-4.06	7.40		pCi/L						
Europium-152	U	1.06	+/-10.6	18.6		pCi/L						
Europium-154	U	-0.988	+/-9.79	18.6		pCi/L						
Europium-155	U	-7.37	+/-12.3	18.4		pCi/L						
Iridium-192	U	-2.55	+/-3.79	6.29		pCi/L						
Iron-59	U	1.55	+/-10.1	16.3		pCi/L						
Lead-210	U	-31.8	+/-267	405		pCi/L						
Lead-212	U	3.67	+/-8.49	12.1		pCi/L						
Lead-214	U	10.9	+/-12.2	16.9		pCi/L						
Manganese-54	U	-2.22	+/-3.97	6.92		pCi/L						
Mercury-203	U	3.80	+/-6.76	7.39		pCi/L						
Neodymium-147	U	-15.4	+/-69.0	122		pCi/L						
Neptunium-239	U	-5.56	+/-28.0	46.9		pCi/L						
Niobium-94	U	-1.32	+/-3.60	6.18		pCi/L						
Niobium-95	U	0.413	+/-4.43	8.25		pCi/L						
Potassium-40	U	32.4	+/-71.8	60.0		pCi/L						
Promethium-144	U	2.69	+/-3.88	7.29		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Project: WNUC00127  
Sample ID: 358770022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.57	+/-4.59	7.98	pCi/L
Radium-228	U	-5.87	+/-21.4	31.9	pCi/L
Ruthenium-106	U	-4.9	+/-33.3	58.9	pCi/L
Silver-110m	U	-4.01	+/-3.86	6.20	pCi/L
Sodium-22	U	-0.291	+/-3.47	6.61	pCi/L
Thallium-208	U	-0.608	+/-5.53	8.30	pCi/L
Thorium-230	U	793	+/-905	1580	pCi/L
Thorium-234	U	13.8	+/-165	169	pCi/L
Tin-113	U	-4.17	+/-4.66	7.99	pCi/L
Uranium-235	U	11.8	+/-20.5	34.8	pCi/L
Uranium-238	U	13.8	+/-165	169	pCi/L
Yttrium-88	U	3.76	+/-4.96	10.6	pCi/L
Zinc-65	U	-12.2	+/-9.80	15.3	pCi/L
Zirconium-95	U	-2.01	+/-7.53	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.199	+/-2.20	4.90	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		4.41	+/-2.60	3.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-14.8	+/-119	209	300	pCi/L	MYM1	11/02/14	1321	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358770023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.77	+/-19.9	34.1		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-51.3	+/-22.7	36.7		pCi/L					
Antimony-124	U	2.32	+/-10.5	20.5		pCi/L					
Antimony-125	U	-0.512	+/-10.9	19.1		pCi/L					
Barium-133	U	-0.832	+/-6.78	8.77		pCi/L					
Barium-140	U	-0.088	+/-12.2	22.6		pCi/L					
Beryllium-7	U	-1.31	+/-51.8	67.3		pCi/L					
Bismuth-212	U	34.2	+/-56.6	107		pCi/L					
Bismuth-214		34.6	+/-16.8	13.7		pCi/L					
Cerium-139	U	-1.1	+/-3.62	6.14		pCi/L					
Cerium-141	U	9.32	+/-8.60	13.8		pCi/L					
Cerium-144	U	-0.407	+/-25.5	44.2		pCi/L					
Cesium-134	U	-4.67	+/-4.65	7.53		pCi/L					
Cesium-136	U	-4.21	+/-11.3	20.0		pCi/L					
Cesium-137	U	-0.404	+/-5.03	7.63	10.0	pCi/L					
Chromium-51	U	41.6	+/-44.9	83.5		pCi/L					
Cobalt-56	U	-1.59	+/-6.22	8.11		pCi/L					
Cobalt-57	U	-1.48	+/-3.15	5.38		pCi/L					
Cobalt-58	U	-2.2	+/-4.57	7.79		pCi/L					
Cobalt-60	U	-1.63	+/-4.43	7.74		pCi/L					
Europium-152	U	-0.437	+/-14.2	22.3		pCi/L					
Europium-154	U	3.92	+/-12.7	23.9		pCi/L					
Europium-155	U	-14.1	+/-15.2	21.8		pCi/L					
Iridium-192	U	1.03	+/-4.04	7.26		pCi/L					
Iron-59	U	2.70	+/-9.57	18.0		pCi/L					
Lead-210	U	88.9	+/-626	990		pCi/L					
Lead-212	U	3.97	+/-9.27	12.1		pCi/L					
Lead-214		18.6	+/-15.3	16.8		pCi/L					
Manganese-54	U	-1.94	+/-3.94	6.40		pCi/L					
Mercury-203	U	-0.412	+/-4.75	8.36		pCi/L					
Neodymium-147	U	20.2	+/-67.0	124		pCi/L					
Neptunium-239	U	3.35	+/-33.8	59.1		pCi/L					
Niobium-94	U	1.56	+/-4.13	7.55		pCi/L					
Niobium-95	U	6.34	+/-5.42	9.39		pCi/L					
Potassium-40	U	49.6	+/-61.5	74.0		pCi/L					
Promethium-144	U	-0.168	+/-3.79	6.78		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358770023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.863	+/-4.91	8.50	pCi/L
Radium-228	U	7.77	+/-19.9	34.1	pCi/L
Ruthenium-106	U	-3.05	+/-32.5	58.5	pCi/L
Silver-110m	U	0.134	+/-4.56	7.03	pCi/L
Sodium-22	U	1.70	+/-4.43	8.45	pCi/L
Thallium-208	U	5.91	+/-6.54	6.66	pCi/L
Thorium-230	U	-3610	+/-1550	2490	pCi/L
Thorium-234	U	4.66	+/-207	358	pCi/L
Tin-113	U	-0.437	+/-5.70	9.94	pCi/L
Uranium-235	U	21.8	+/-33.8	42.0	pCi/L
Uranium-238	U	4.66	+/-207	358	pCi/L
Yttrium-88	U	-0.0521	+/-5.10	9.57	pCi/L
Zinc-65	U	5.33	+/-9.19	15.8	pCi/L
Zirconium-95	U	-13	+/-10.1	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.78	+/-3.66	4.92	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		25.5	+/-4.08	3.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	137	+/-126	210	300	pCi/L	MYM1	11/02/14	1338	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 358770024  
Matrix: Water  
Collect Date: 06-OCT-14 10:22  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-12.5	+/-14.0	20.5		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-2.09	+/-11.7	17.7		pCi/L					
Antimony-124	U	2.05	+/-8.42	16.9		pCi/L					
Antimony-125	U	0.689	+/-8.11	14.4		pCi/L					
Barium-133	U	-0.378	+/-4.16	6.36		pCi/L					
Barium-140	U	-0.0273	+/-9.17	17.7		pCi/L					
Beryllium-7	U	0.732	+/-28.3	52.5		pCi/L					
Bismuth-212	U	-15.6	+/-43.5	77.0		pCi/L					
Bismuth-214		21.9	+/-11.7	11.5		pCi/L					
Cerium-139	U	-0.841	+/-2.68	4.71		pCi/L					
Cerium-141	U	2.14	+/-6.61	10.7		pCi/L					
Cerium-144	U	-4.88	+/-18.5	30.4		pCi/L					
Cesium-134	U	2.17	+/-3.24	6.40		pCi/L					
Cesium-136	U	-3.79	+/-9.87	17.2		pCi/L					
Cesium-137	U	0.994	+/-2.78	5.36	10.0	pCi/L					
Chromium-51	U	18.5	+/-36.5	66.6		pCi/L					
Cobalt-56	U	2.91	+/-3.63	7.16		pCi/L					
Cobalt-57	U	0.0212	+/-2.24	4.04		pCi/L					
Cobalt-58	U	4.19	+/-3.39	6.54		pCi/L					
Cobalt-60	U	0.054	+/-3.67	6.58		pCi/L					
Europium-152	U	-2.35	+/-8.56	14.8		pCi/L					
Europium-154	U	-5.8	+/-9.10	16.0		pCi/L					
Europium-155	U	1.29	+/-9.22	16.3		pCi/L					
Iridium-192	U	0.433	+/-3.43	6.09		pCi/L					
Iron-59	U	-6.46	+/-7.58	12.2		pCi/L					
Lead-210	U	82.0	+/-438	391		pCi/L					
Lead-212	U	5.47	+/-6.43	10.7		pCi/L					
Lead-214		19.5	+/-11.7	11.0		pCi/L					
Manganese-54	U	-0.618	+/-3.24	5.79		pCi/L					
Mercury-203	U	0.428	+/-3.64	6.47		pCi/L					
Neodymium-147	U	-9.84	+/-51.7	94.7		pCi/L					
Neptunium-239	U	-14.3	+/-25.4	38.9		pCi/L					
Niobium-94	U	-0.178	+/-3.24	5.34		pCi/L					
Niobium-95	U	3.45	+/-3.69	7.31		pCi/L					
Potassium-40	U	30.9	+/-64.6	58.4		pCi/L					
Promethium-144	U	1.23	+/-3.50	5.79		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 358770024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.21	+/-3.73	6.64	pCi/L
Radium-228	U	-12.5	+/-14.0	20.5	pCi/L
Ruthenium-106	U	-10.2	+/-25.4	45.2	pCi/L
Silver-110m	U	-0.921	+/-2.72	4.87	pCi/L
Sodium-22	U	-1.7	+/-3.20	5.70	pCi/L
Thallium-208	U	0.759	+/-5.23	5.27	pCi/L
Thorium-230	U	1390	+/-1370	1490	pCi/L
Thorium-234	U	116	+/-145	207	pCi/L
Tin-113	U	-0.582	+/-3.70	6.45	pCi/L
Uranium-235	U	-9.35	+/-21.9	33.8	pCi/L
Uranium-238	U	116	+/-145	207	pCi/L
Yttrium-88	U	1.75	+/-3.45	7.36	pCi/L
Zinc-65	U	-2.21	+/-7.64	11.4	pCi/L
Zirconium-95	U	-0.97	+/-5.90	10.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.31	+/-2.75	4.92	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta		17.3	+/-4.04	4.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	39.3	+/-121	208	300	pCi/L	MYM1	11/02/14	1354	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	358770025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.48	+/-16.3	27.1		pCi/L		MJH1	10/24/14	0636 1428419	1
Americium-241	U	-10.6	+/-11.1	19.0		pCi/L					
Antimony-124	U	-1.41	+/-9.86	15.4		pCi/L					
Antimony-125	U	-1.66	+/-9.58	14.9		pCi/L					
Barium-133	U	-1.78	+/-4.75	7.28		pCi/L					
Barium-140	U	2.53	+/-7.50	15.1		pCi/L					
Beryllium-7	U	2.36	+/-31.7	57.7		pCi/L					
Bismuth-212	U	26.7	+/-46.8	88.2		pCi/L					
Bismuth-214		17.8	+/-12.1	11.6		pCi/L					
Cerium-139	U	1.59	+/-2.99	5.35		pCi/L					
Cerium-141	U	2.85	+/-6.30	11.2		pCi/L					
Cerium-144	U	-30.8	+/-19.4	31.6		pCi/L					
Cesium-134	U	1.73	+/-3.63	6.68		pCi/L					
Cesium-136	U	-7.06	+/-9.38	16.2		pCi/L					
Cesium-137	U	0.388	+/-3.26	5.95	10.0	pCi/L					
Chromium-51	U	-2.12	+/-34.7	59.8		pCi/L					
Cobalt-56	U	0.749	+/-3.17	5.91		pCi/L					
Cobalt-57	U	-0.184	+/-2.40	4.21		pCi/L					
Cobalt-58	U	-1.08	+/-4.00	6.27		pCi/L					
Cobalt-60	U	2.68	+/-4.95	7.75		pCi/L					
Europium-152	U	0.618	+/-10.0	17.3		pCi/L					
Europium-154	U	2.59	+/-8.38	16.6		pCi/L					
Europium-155	U	0.667	+/-9.75	17.3		pCi/L					
Iridium-192	U	0.0254	+/-3.64	6.27		pCi/L					
Iron-59	U	-0.69	+/-7.44	13.8		pCi/L					
Lead-210	U	16.4	+/-287	293		pCi/L					
Lead-212	U	-1.65	+/-7.37	11.4		pCi/L					
Lead-214		14.5	+/-13.1	13.4		pCi/L					
Manganese-54	U	2.10	+/-3.49	6.57		pCi/L					
Mercury-203	U	-0.591	+/-4.17	6.22		pCi/L					
Neodymium-147	U	40.0	+/-55.8	106		pCi/L					
Neptunium-239	U	12.9	+/-24.7	44.7		pCi/L					
Niobium-94	U	0.915	+/-4.18	5.79		pCi/L					
Niobium-95	U	-0.144	+/-4.02	7.15		pCi/L					
Potassium-40	U	-32.7	+/-45.6	82.1		pCi/L					
Promethium-144	U	-3.72	+/-3.46	5.61		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 43 Project: WNUC00127  
Sample ID: 358770025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.07	+/-4.01	7.40	pCi/L
Radium-228	U	8.48	+/-16.3	27.1	pCi/L
Ruthenium-106	U	-7.21	+/-31.4	55.4	pCi/L
Silver-110m	U	0.0158	+/-2.92	5.31	pCi/L
Sodium-22	U	1.01	+/-2.97	5.92	pCi/L
Thallium-208	U	-2.22	+/-4.52	6.74	pCi/L
Thorium-230	U	46.2	+/-814	1460	pCi/L
Thorium-234	U	-83.7	+/-118	190	pCi/L
Tin-113	U	4.39	+/-4.17	8.06	pCi/L
Uranium-235	U	-20	+/-24.1	34.9	pCi/L
Uranium-238	U	-83.7	+/-118	190	pCi/L
Yttrium-88	U	-0.185	+/-3.82	7.44	pCi/L
Zinc-65	U	-9.92	+/-8.00	13.0	pCi/L
Zirconium-95	U	2.32	+/-6.45	12.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.673	+/-1.94	4.59	5.00	pCi/L	JXH3	11/03/14	1653	1430825	2
Beta	U	3.08	+/-2.66	4.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	102	+/-124	210	300	pCi/L	MYM1	11/02/14	1411	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	358770026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:00		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.49	+/-15.8	30.3		pCi/L		MJH1	10/24/14	0637 1428419	1
Americium-241	U	-2.36	+/-5.46	8.48		pCi/L					
Antimony-124	U	-0.689	+/-9.89	19.1		pCi/L					
Antimony-125	U	2.00	+/-8.64	15.5		pCi/L					
Barium-133	U	-2.77	+/-5.28	7.65		pCi/L					
Barium-140	U	5.34	+/-11.1	23.0		pCi/L					
Beryllium-7	U	-18.5	+/-30.6	53.6		pCi/L					
Bismuth-212	U	10.7	+/-57.8	93.0		pCi/L					
Bismuth-214		23.6	+/-15.0	13.1		pCi/L					
Cerium-139	U	-0.262	+/-3.03	5.09		pCi/L					
Cerium-141	U	-3.62	+/-6.13	10.1		pCi/L					
Cerium-144	U	-4.83	+/-17.4	29.4		pCi/L					
Cesium-134	U	-0.555	+/-4.37	7.01		pCi/L					
Cesium-136	U	-8.77	+/-12.4	21.0		pCi/L					
Cesium-137	U	2.62	+/-3.95	7.58	10.0	pCi/L					
Chromium-51	U	6.11	+/-40.3	71.9		pCi/L					
Cobalt-56	U	-0.481	+/-5.24	8.37		pCi/L					
Cobalt-57	U	-0.583	+/-2.08	3.54		pCi/L					
Cobalt-58	U	1.16	+/-4.63	7.53		pCi/L					
Cobalt-60	U	-3.0	+/-4.04	6.99		pCi/L					
Europium-152	U	-8.57	+/-11.1	16.7		pCi/L					
Europium-154	U	6.09	+/-13.4	22.9		pCi/L					
Europium-155	U	-4.23	+/-8.18	13.8		pCi/L					
Iridium-192	U	1.78	+/-3.78	6.87		pCi/L					
Iron-59	U	4.48	+/-9.46	18.5		pCi/L					
Lead-210	U	-21.8	+/-70.3	123		pCi/L					
Lead-212	U	1.49	+/-8.50	10.1		pCi/L					
Lead-214	U	8.74	+/-12.6	14.8		pCi/L					
Manganese-54	U	-0.258	+/-4.26	6.84		pCi/L					
Mercury-203	U	1.22	+/-3.98	7.19		pCi/L					
Neodymium-147	U	-5.31	+/-68.6	125		pCi/L					
Neptunium-239	U	-27.5	+/-22.0	35.1		pCi/L					
Niobium-94	U	5.24	+/-4.23	5.76		pCi/L					
Niobium-95	U	0.256	+/-4.55	8.20		pCi/L					
Potassium-40	U	13.7	+/-50.1	73.0		pCi/L					
Promethium-144	U	1.59	+/-3.92	6.50		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 44 Project: WNUC00127  
Sample ID: 358770026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.12	+/-4.23	7.94	pCi/L
Radium-228	U	5.49	+/-15.8	30.3	pCi/L
Ruthenium-106	U	20.6	+/-23.1	64.1	pCi/L
Silver-110m	U	-1.27	+/-3.83	6.69	pCi/L
Sodium-22	U	2.15	+/-4.73	7.80	pCi/L
Thallium-208	U	-1.75	+/-4.51	7.38	pCi/L
Thorium-230	U	-479	+/-576	801	pCi/L
Thorium-234	U	79.2	+/-73.2	84.5	pCi/L
Tin-113	U	-0.335	+/-4.97	8.63	pCi/L
Uranium-235	U	-5.19	+/-22.5	33.3	pCi/L
Uranium-238	U	79.2	+/-73.2	84.5	pCi/L
Yttrium-88	U	4.64	+/-5.11	11.1	pCi/L
Zinc-65	U	-10.3	+/-11.8	15.9	pCi/L
Zirconium-95	U	-2.18	+/-6.58	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.931	+/-1.67	4.36	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta	U	3.11	+/-2.31	3.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.33	+/-120	210	300	pCi/L	MYM1	11/02/14	1427	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 10:25		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.91	+/-19.9	32.0		pCi/L		MJH1	10/24/14	0649 1428419	1
Americium-241	U	-24.6	+/-29.1	41.9		pCi/L					
Antimony-124	UI	0.00	+/-7.77	14.1		pCi/L					
Antimony-125	U	3.75	+/-10.8	20.1		pCi/L					
Barium-133	U	0.281	+/-6.44	9.73		pCi/L					
Barium-140	U	0.334	+/-12.5	24.0		pCi/L					
Beryllium-7	U	26.3	+/-38.4	73.5		pCi/L					
Bismuth-212	U	-19.9	+/-66.1	98.7		pCi/L					
Bismuth-214		20.5	+/-14.8	13.5		pCi/L					
Cerium-139	U	-3.28	+/-3.63	6.15		pCi/L					
Cerium-141	U	-0.457	+/-9.21	14.4		pCi/L					
Cerium-144	U	-2.21	+/-24.0	42.9		pCi/L					
Cesium-134	U	-2.59	+/-4.73	7.69		pCi/L					
Cesium-136	U	3.35	+/-11.0	21.5		pCi/L					
Cesium-137	U	-1.66	+/-4.35	7.54	10.0	pCi/L					
Chromium-51	U	-30.2	+/-46.4	77.0		pCi/L					
Cobalt-56	U	3.54	+/-4.65	9.26		pCi/L					
Cobalt-57	U	2.04	+/-3.15	5.84		pCi/L					
Cobalt-58	U	-0.0672	+/-4.54	8.48		pCi/L					
Cobalt-60	U	-5.51	+/-4.44	6.61		pCi/L					
Europium-152	U	-0.272	+/-10.9	18.9		pCi/L					
Europium-154	U	-6.05	+/-13.3	19.0		pCi/L					
Europium-155	U	-3.5	+/-13.4	22.4		pCi/L					
Iridium-192	U	-0.89	+/-4.38	7.51		pCi/L					
Iron-59	U	-1.54	+/-9.24	16.9		pCi/L					
Lead-210	U	279	+/-956	1700		pCi/L					
Lead-212	U	-0.861	+/-9.85	16.2		pCi/L					
Lead-214		22.6	+/-15.3	15.4		pCi/L					
Manganese-54	U	-3.18	+/-4.39	7.61		pCi/L					
Mercury-203	U	-0.126	+/-4.62	8.06		pCi/L					
Neodymium-147	U	-54.7	+/-65.8	111		pCi/L					
Neptunium-239	U	-9.82	+/-32.4	57.6		pCi/L					
Niobium-94	U	-2.12	+/-3.97	6.72		pCi/L					
Niobium-95	U	-1.46	+/-5.46	9.24		pCi/L					
Potassium-40	U	14.4	+/-58.1	104		pCi/L					
Promethium-144	U	4.13	+/-4.11	8.02		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.17	+/-4.79	9.05	pCi/L
Radium-228	U	-2.91	+/-19.9	32.0	pCi/L
Ruthenium-106	U	24.8	+/-39.4	67.2	pCi/L
Silver-110m	U	0.930	+/-3.88	7.17	pCi/L
Sodium-22	U	-2.2	+/-4.67	6.68	pCi/L
Thallium-208	U	3.15	+/-7.32	7.14	pCi/L
Thorium-230	U	-1280	+/-1950	2840	pCi/L
Thorium-234	U	163	+/-346	432	pCi/L
Tin-113	U	-3.01	+/-5.37	8.49	pCi/L
Uranium-235	U	7.98	+/-40.0	47.2	pCi/L
Uranium-238	U	163	+/-346	432	pCi/L
Yttrium-88	U	-0.634	+/-5.18	9.60	pCi/L
Zinc-65	U	-3.77	+/-9.35	13.8	pCi/L
Zirconium-95	U	2.64	+/-8.33	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		3.95	+/-2.93	3.77	5.00	pCi/L	JXH3	11/03/14	1654	1430825	2
Beta		74.7	+/-7.38	4.31	5.00	pCi/L					
Alpha	U	3.53	+/-3.67	4.66	5.00	pCi/L	JXH3	11/05/14	0844	1430825	3
Beta		63.7	+/-6.68	3.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	104	+/-121	203	300	pCi/L	MYM1	11/02/14	1444	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358770027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	358770028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:05		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.51	+/-18.2	29.8		pCi/L		MJH1	10/24/14	0649 1428419	1
Americium-241	U	-49.9	+/-38.0	60.1		pCi/L					
Antimony-124	U	-2.59	+/-11.3	20.7		pCi/L					
Antimony-125	U	3.05	+/-10.0	18.3		pCi/L					
Barium-133	U	6.49	+/-5.55	9.46		pCi/L					
Barium-140	U	-2.3	+/-10.8	20.1		pCi/L					
Beryllium-7	U	20.8	+/-36.9	69.0		pCi/L					
Bismuth-212	U	11.0	+/-56.3	102		pCi/L					
Bismuth-214	UI	0.00	+/-16.7	14.8		pCi/L					
Cerium-139	U	1.93	+/-3.49	6.36		pCi/L					
Cerium-141	U	-1.53	+/-9.96	14.9		pCi/L					
Cerium-144	U	-17.7	+/-27.5	40.6		pCi/L					
Cesium-134	U	1.89	+/-4.28	8.03		pCi/L					
Cesium-136	U	1.39	+/-12.4	23.7		pCi/L					
Cesium-137	U	-0.578	+/-4.27	7.50	10.0	pCi/L					
Chromium-51	U	-7.69	+/-46.1	80.8		pCi/L					
Cobalt-56	U	0.555	+/-4.20	7.97		pCi/L					
Cobalt-57	U	2.82	+/-3.29	6.08		pCi/L					
Cobalt-58	U	-1.44	+/-4.62	7.97		pCi/L					
Cobalt-60	U	-1.52	+/-4.22	7.60		pCi/L					
Europium-152	U	-1.17	+/-12.0	20.6		pCi/L					
Europium-154	U	-2.1	+/-12.3	22.6		pCi/L					
Europium-155	U	1.86	+/-14.2	25.5		pCi/L					
Iridium-192	U	-0.709	+/-4.34	7.61		pCi/L					
Iron-59	U	1.98	+/-9.01	17.4		pCi/L					
Lead-210	U	-544	+/-1520	2030		pCi/L					
Lead-212	U	0.230	+/-9.69	14.0		pCi/L					
Lead-214		22.2	+/-12.0	16.1		pCi/L					
Manganese-54	U	1.12	+/-4.45	7.42		pCi/L					
Mercury-203	U	-3.05	+/-5.29	7.72		pCi/L					
Neodymium-147	U	-20.1	+/-74.4	130		pCi/L					
Neptunium-239	U	-27.5	+/-34.0	58.3		pCi/L					
Niobium-94	U	0.128	+/-4.00	7.11		pCi/L					
Niobium-95	U	3.66	+/-6.49	6.67		pCi/L					
Potassium-40	U	-24.2	+/-57.7	100		pCi/L					
Promethium-144	U	5.76	+/-4.35	8.49		pCi/L					

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 358770028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.08	+/-4.94	8.21	pCi/L
Radium-228	U	-5.51	+/-18.2	29.8	pCi/L
Ruthenium-106	U	38.4	+/-42.0	71.9	pCi/L
Silver-110m	U	2.61	+/-3.95	7.47	pCi/L
Sodium-22	U	-0.25	+/-4.25	7.94	pCi/L
Thallium-208	UI	0.00	+/-6.74	6.89	pCi/L
Thorium-230	U	372	+/-2190	3830	pCi/L
Thorium-234	U	-316	+/-387	514	pCi/L
Tin-113	U	0.0733	+/-5.50	9.75	pCi/L
Uranium-235	U	4.11	+/-31.9	45.7	pCi/L
Uranium-238	U	-316	+/-387	514	pCi/L
Yttrium-88	U	1.15	+/-3.73	7.91	pCi/L
Zinc-65	U	0.764	+/-8.52	16.1	pCi/L
Zirconium-95	U	2.43	+/-7.57	14.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.326	+/-1.95	4.47	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta		8.45	+/-3.08	3.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	45.5	+/-122	210	300	pCi/L	MYM1	11/02/14	1501	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358770029  
Matrix: Water  
Collect Date: 08-OCT-14 09:42  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.14	+/-16.5	26.4		pCi/L		MJH1	10/24/14	0650 1428419	1
Americium-241	U	-2.05	+/-11.2	17.5		pCi/L					
Antimony-124	U	7.46	+/-7.52	16.6		pCi/L					
Antimony-125	U	-0.071	+/-8.90	15.6		pCi/L					
Barium-133	U	1.67	+/-4.46	7.15		pCi/L					
Barium-140	U	1.92	+/-8.17	15.9		pCi/L					
Beryllium-7	U	9.72	+/-47.2	53.8		pCi/L					
Bismuth-212	U	3.09	+/-47.6	86.5		pCi/L					
Bismuth-214		34.5	+/-14.3	11.6		pCi/L					
Cerium-139	U	-0.375	+/-3.38	5.04		pCi/L					
Cerium-141	U	-2.37	+/-6.12	10.2		pCi/L					
Cerium-144	U	-7.47	+/-18.8	31.5		pCi/L					
Cesium-134	U	-1.46	+/-3.74	6.52		pCi/L					
Cesium-136	U	-0.874	+/-8.34	15.0		pCi/L					
Cesium-137	U	-1.6	+/-3.23	5.66	10.0	pCi/L					
Chromium-51	U	-5.68	+/-33.8	59.5		pCi/L					
Cobalt-56	U	1.76	+/-3.71	6.98		pCi/L					
Cobalt-57	U	-0.596	+/-2.35	3.98		pCi/L					
Cobalt-58	U	-1.26	+/-3.94	5.92		pCi/L					
Cobalt-60	U	0.244	+/-3.35	6.34		pCi/L					
Europium-152	U	-1.28	+/-9.35	15.8		pCi/L					
Europium-154	U	-9.45	+/-8.18	13.0		pCi/L					
Europium-155	U	5.50	+/-9.11	16.2		pCi/L					
Iridium-192	U	2.32	+/-3.40	6.26		pCi/L					
Iron-59	U	-0.661	+/-8.41	13.5		pCi/L					
Lead-210	U	115	+/-331	298		pCi/L					
Lead-212	U	3.47	+/-7.13	10.3		pCi/L					
Lead-214		28.9	+/-14.5	12.0		pCi/L					
Manganese-54	U	2.56	+/-6.91	5.67		pCi/L					
Mercury-203	U	3.00	+/-3.52	6.57		pCi/L					
Neodymium-147	U	-64	+/-56.5	88.4		pCi/L					
Neptunium-239	U	4.42	+/-24.1	41.9		pCi/L					
Niobium-94	U	-1.72	+/-3.02	5.22		pCi/L					
Niobium-95	U	1.16	+/-3.87	7.15		pCi/L					
Potassium-40	U	50.6	+/-78.7	62.5		pCi/L					
Promethium-144	U	2.25	+/-3.25	6.19		pCi/L					



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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358770029

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.51	+/-4.07	7.31	pCi/L
Radium-228	U	3.14	+/-16.5	26.4	pCi/L
Ruthenium-106	U	-20.4	+/-28.6	49.3	pCi/L
Silver-110m	U	1.75	+/-2.97	5.71	pCi/L
Sodium-22	U	-3.34	+/-2.89	4.58	pCi/L
Thallium-208	U	-3.26	+/-4.45	6.38	pCi/L
Thorium-230	U	344	+/-908	1460	pCi/L
Thorium-234	U	49.7	+/-162	203	pCi/L
Tin-113	U	-1.36	+/-4.26	7.34	pCi/L
Uranium-235	U	-18.8	+/-22.6	33.7	pCi/L
Uranium-238	U	49.7	+/-162	203	pCi/L
Yttrium-88	U	0.00	+/-3.40	6.72	pCi/L
Zinc-65	U	4.09	+/-11.5	13.1	pCi/L
Zirconium-95	U	-2.97	+/-7.60	11.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.344	+/-2.35	4.69	5.00	pCi/L	JXH3	11/03/14	1652	1430825	2
Beta	U	0.461	+/-2.25	4.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-11.7	+/-120	210	300	pCi/L	MYM1	11/02/14	1517	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.1	+/-16.7	27.0		pCi/L		MJH1	10/24/14	0650 1428419	1
Americium-241	U	4.73	+/-13.0	23.5		pCi/L					
Antimony-124	U	2.49	+/-8.12	16.7		pCi/L					
Antimony-125	U	6.16	+/-8.17	15.5		pCi/L					
Barium-133	U	-0.343	+/-4.23	6.62		pCi/L					
Barium-140	U	7.52	+/-8.56	18.7		pCi/L					
Beryllium-7	U	-10.6	+/-30.0	51.8		pCi/L					
Bismuth-212	U	-7.05	+/-43.0	68.9		pCi/L					
Bismuth-214		29.4	+/-13.8	11.1		pCi/L					
Cerium-139	U	0.885	+/-2.78	4.84		pCi/L					
Cerium-141	U	-1.06	+/-5.97	10.1		pCi/L					
Cerium-144	U	13.4	+/-19.1	32.8		pCi/L					
Cesium-134	U	-0.0352	+/-3.47	6.45		pCi/L					
Cesium-136	U	8.92	+/-10.3	17.6		pCi/L					
Cesium-137	U	-2.12	+/-3.98	6.58	10.0	pCi/L					
Chromium-51	U	29.7	+/-34.9	66.3		pCi/L					
Cobalt-56	U	1.68	+/-3.28	6.44		pCi/L					
Cobalt-57	U	-3.05	+/-2.63	3.78		pCi/L					
Cobalt-58	U	1.35	+/-3.21	6.26		pCi/L					
Cobalt-60	U	0.820	+/-3.42	5.84		pCi/L					
Europium-152	U	-2.99	+/-8.67	15.2		pCi/L					
Europium-154	U	-3.44	+/-8.93	15.7		pCi/L					
Europium-155	U	0.400	+/-9.83	17.1		pCi/L					
Iridium-192	U	-2.34	+/-3.27	5.61		pCi/L					
Iron-59	U	3.90	+/-6.59	13.3		pCi/L					
Lead-210	U	-251	+/-322	476		pCi/L					
Lead-212	U	5.82	+/-9.67	8.78		pCi/L					
Lead-214		19.7	+/-12.9	17.2		pCi/L					
Manganese-54	U	2.85	+/-3.08	6.49		pCi/L					
Mercury-203	U	3.39	+/-3.48	6.64		pCi/L					
Neodymium-147	U	6.07	+/-59.0	106		pCi/L					
Neptunium-239	U	12.8	+/-23.6	42.1		pCi/L					
Niobium-94	U	-0.626	+/-3.06	5.58		pCi/L					
Niobium-95	U	-0.672	+/-4.53	6.80		pCi/L					
Potassium-40	U	41.8	+/-38.2	51.2		pCi/L					
Promethium-144	U	-1.57	+/-2.77	4.90		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.554	+/-3.80	6.72	pCi/L
Radium-228	U	-4.1	+/-16.7	27.0	pCi/L
Ruthenium-106	U	8.24	+/-31.0	55.9	pCi/L
Silver-110m	U	0.683	+/-3.26	5.86	pCi/L
Sodium-22	U	-1.21	+/-3.15	5.54	pCi/L
Thallium-208	U	7.87	+/-6.13	5.21	pCi/L
Thorium-230	U	-516	+/-912	1560	pCi/L
Thorium-234	U	-108	+/-147	221	pCi/L
Tin-113	U	3.29	+/-4.47	7.59	pCi/L
Uranium-235	U	-9.26	+/-22.8	31.8	pCi/L
Uranium-238	U	-108	+/-147	221	pCi/L
Yttrium-88	U	-1.15	+/-3.87	7.14	pCi/L
Zinc-65	U	-0.241	+/-8.14	12.9	pCi/L
Zirconium-95	U	-0.216	+/-5.82	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha		5.07	+/-3.84	4.96	5.00	pCi/L	JXH3	11/03/14	1653	1430825	2
Beta		97.8	+/-8.29	3.87	5.00	pCi/L					
Alpha	U	-0.774	+/-2.27	4.98	5.00	pCi/L	JXH3	11/05/14	0844	1430825	3
Beta		101	+/-6.71	3.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	102	+/-124	209	300	pCi/L	MYM1	11/02/14	1534	1429883	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl  
Sample ID: 358770030

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Dupl  
Sample ID: 358770031  
Matrix: Water  
Collect Date: 07-OCT-14 08:47  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	5.92	+/-18.7	32.6		pCi/L		MJH1	10/24/14	0650	1428419	1
Americium-241	U	3.49	+/-33.9	50.5		pCi/L						
Antimony-124	U	2.66	+/-8.92	18.6		pCi/L						
Antimony-125	U	1.19	+/-9.81	17.7		pCi/L						
Barium-133	U	4.28	+/-4.91	8.47		pCi/L						
Barium-140	U	5.56	+/-10.8	22.4		pCi/L						
Beryllium-7	U	2.06	+/-35.5	63.4		pCi/L						
Bismuth-212	U	29.6	+/-53.7	104		pCi/L						
Bismuth-214		22.1	+/-14.6	15.0		pCi/L						
Cerium-139	U	0.375	+/-3.61	6.21		pCi/L						
Cerium-141	U	3.22	+/-7.59	13.4		pCi/L						
Cerium-144	U	-2.17	+/-23.4	40.3		pCi/L						
Cesium-134	U	-0.244	+/-6.91	7.29		pCi/L						
Cesium-136	U	0.279	+/-11.4	21.9		pCi/L						
Cesium-137	U	-1.17	+/-3.43	6.18	10.0	pCi/L						
Chromium-51	U	-6.79	+/-41.6	74.0		pCi/L						
Cobalt-56	U	-2.05	+/-4.55	7.89		pCi/L						
Cobalt-57	U	0.0792	+/-3.04	5.30		pCi/L						
Cobalt-58	U	-0.172	+/-4.94	7.82		pCi/L						
Cobalt-60	U	3.48	+/-3.84	8.33		pCi/L						
Europium-152	U	8.92	+/-11.3	21.2		pCi/L						
Europium-154	U	-6.33	+/-11.8	20.8		pCi/L						
Europium-155	U	9.87	+/-12.0	22.1		pCi/L						
Iridium-192	U	-0.973	+/-3.87	6.84		pCi/L						
Iron-59	U	-4.33	+/-8.56	15.3		pCi/L						
Lead-210	U	456	+/-1020	1900		pCi/L						
Lead-212	U	1.97	+/-11.7	14.2		pCi/L						
Lead-214	UI	0.00	+/-17.2	19.8		pCi/L						
Manganese-54	U	2.77	+/-3.65	7.30		pCi/L						
Mercury-203	U	0.378	+/-4.93	8.17		pCi/L						
Neodymium-147	U	-79.8	+/-74.1	116		pCi/L						
Neptunium-239	U	-13.2	+/-31.8	54.2		pCi/L						
Niobium-94	U	3.19	+/-4.16	8.02		pCi/L						
Niobium-95	U	0.431	+/-4.31	8.00		pCi/L						
Potassium-40	U	17.7	+/-79.8	91.8		pCi/L						
Promethium-144	U	-2.23	+/-3.47	5.99		pCi/L						

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## Certificate of Analysis

Report Date: November 7, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Dupl  
Sample ID: 358770031

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.560	+/-4.45	8.03	pCi/L
Radium-228	U	5.92	+/-18.7	32.6	pCi/L
Ruthenium-106	U	-36.7	+/-31.7	52.0	pCi/L
Silver-110m	U	0.563	+/-3.19	6.09	pCi/L
Sodium-22	U	-3.85	+/-4.41	7.35	pCi/L
Thallium-208	U	5.40	+/-5.17	5.73	pCi/L
Thorium-230	U	2560	+/-1980	2830	pCi/L
Thorium-234	U	77.0	+/-321	435	pCi/L
Tin-113	U	0.0294	+/-5.13	9.13	pCi/L
Uranium-235	U	20.2	+/-23.3	42.0	pCi/L
Uranium-238	U	77.0	+/-321	435	pCi/L
Yttrium-88	U	3.62	+/-3.96	9.34	pCi/L
Zinc-65	U	-7.45	+/-9.04	15.4	pCi/L
Zirconium-95	U	2.58	+/-7.58	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.552	+/-2.44	4.90	5.00	pCi/L	JXH3	11/03/14	1651	1430825	2
Beta	U	0.751	+/-2.43	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.16	+/-116	203	300	pCi/L	MYM1	11/02/14	1550	1429883	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## QC Summary

Report Date: November 7, 2014

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 358770

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428415										
QC1203190145	358770001	DUP									
Actinium-228	U	0.786	U	29.1	pCi/L	N/A		N/A	MJH1	10/23/14	11:43
	Uncertainty	+/-16.6		+/-25.1							
Americium-241	U	0.0578	U	5.34	pCi/L	N/A		N/A			
	Uncertainty	+/-29.3		+/-35.4							
Antimony-124	U	-5.09	U	0.365	pCi/L	N/A		N/A			
	Uncertainty	+/-8.60		+/-12.6							
Antimony-125	U	-4.15	U	-12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-9.16		+/-12.2							
Barium-133	U	-1.68	U	5.27	pCi/L	N/A		N/A			
	Uncertainty	+/-5.07		+/-4.25							
Barium-140	U	-4.03	U	0.814	pCi/L	N/A		N/A			
	Uncertainty	+/-9.11		+/-11.1							
Beryllium-7	U	12.1	U	42.0	pCi/L	N/A		N/A			
	Uncertainty	+/-30.4		+/-43.9							
Bismuth-212	U	-22.7	U	40.1	pCi/L	N/A		N/A			
	Uncertainty	+/-53.6		+/-59.2							
Bismuth-214		32.2	U	10.2	pCi/L	43.7		(0% - 100%)			
	Uncertainty	+/-14.4		+/-13.7							
Cerium-139	U	-2.46	U	-0.946	pCi/L	N/A		N/A			
	Uncertainty	+/-3.49		+/-3.83							
Cerium-141	U	-2.23	U	6.10	pCi/L	N/A		N/A			
	Uncertainty	+/-6.83		+/-8.29							
Cerium-144	U	-5.83	U	1.73	pCi/L	N/A		N/A			
	Uncertainty	+/-23.7		+/-25.7							
Cesium-134	U	2.94	U	2.51	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-4.62							
Cesium-136	U	-0.886	U	-4.99	pCi/L	N/A		N/A			
	Uncertainty	+/-9.29		+/-11.8							
Cesium-137	U	0.311	U	0.0322	pCi/L	N/A		N/A			
	Uncertainty	+/-3.65		+/-4.13							
Chromium-51	U	6.64	U	13.8	pCi/L	N/A		N/A			
	Uncertainty	+/-37.8		+/-48.3							
Cobalt-56	U	-0.664	U	0.471	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-5.37							
Cobalt-57	U	-0.383	U	1.08	pCi/L	N/A		N/A			
	Uncertainty	+/-2.78		+/-3.51							
Cobalt-58	U	1.55	U	-3.0	pCi/L	N/A		N/A			
	Uncertainty	+/-3.36		+/-4.31							
Cobalt-60	U	-3.21	U	3.00	pCi/L	N/A		N/A			
	Uncertainty	+/-4.72		+/-4.09							

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Europium-152	U	-2.01	U	3.32	pCi/L	N/A			N/A MJH1	10/23/14	11:43
	Uncertainty	+/-10.1		+/-12.7							
Europium-154	U	3.37	U	-6.8	pCi/L	N/A			N/A		
	Uncertainty	+/-10.7		+/-14.8							
Europium-155	U	4.23	U	9.79	pCi/L	N/A			N/A		
	Uncertainty	+/-11.4		+/-14.3							
Iridium-192	U	-1.99	U	-1.32	pCi/L	N/A			N/A		
	Uncertainty	+/-3.37		+/-4.33							
Iron-59	U	0.244	U	8.07	pCi/L	N/A			N/A		
	Uncertainty	+/-8.99		+/-8.61							
Lead-210	U	-271	U	310	pCi/L	N/A			N/A		
	Uncertainty	+/-1290		+/-1290							
Lead-212		13.4	U	9.49	pCi/L	13.6		(0% - 100%)			
	Uncertainty	+/-9.89		+/-11.4							
Lead-214		19.4	U	3.66	pCi/L	2.85		(0% - 100%)			
	Uncertainty	+/-12.9		+/-12.7							
Manganese-54	U	-0.649	U	-2.6	pCi/L	N/A			N/A		
	Uncertainty	+/-2.93		+/-4.48							
Mercury-203	U	1.75	U	-2.42	pCi/L	N/A			N/A		
	Uncertainty	+/-3.64		+/-5.19							
Neodymium-147	U	29.8	U	-16.3	pCi/L	N/A			N/A		
	Uncertainty	+/-51.4		+/-83.1							
Neptunium-239	U	19.4	U	2.98	pCi/L	N/A			N/A		
	Uncertainty	+/-31.5		+/-37.7							
Niobium-94	U	5.44	U	0.867	pCi/L	N/A			N/A		
	Uncertainty	+/-3.32		+/-4.38							
Niobium-95	U	1.62	U	4.45	pCi/L	N/A			N/A		
	Uncertainty	+/-3.47		+/-4.59							
Potassium-40	U	41.8	U	68.8	pCi/L	N/A			N/A		
	Uncertainty	+/-75.7		+/-66.4							
Promethium-144	U	2.98	U	0.925	pCi/L	N/A			N/A		
	Uncertainty	+/-3.21		+/-4.23							
Promethium-146	U	1.04	U	4.58	pCi/L	N/A			N/A		
	Uncertainty	+/-4.10		+/-5.35							
Radium-228	U	0.786	U	29.1	pCi/L	N/A			N/A		
	Uncertainty	+/-16.6		+/-25.1							
Ruthenium-106	U	-0.394	U	8.59	pCi/L	N/A			N/A		
	Uncertainty	+/-30.9		+/-35.4							
Silver-110m	U	-2.15	U	-1.08	pCi/L	N/A			N/A		
	Uncertainty	+/-3.41		+/-4.01							
Sodium-22	U	1.19	U	-3.2	pCi/L	N/A			N/A		
	Uncertainty	+/-3.78		+/-5.41							



# GEL LABORATORIES LLC

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Thallium-208	U	-2.35	U	-0.234	pCi/L	N/A		N/A			
	Uncertainty	+/-4.55		+/-5.15							
Thorium-230	U	404	U	2130	pCi/L	N/A		N/A	MJH1	10/23/14	11:43
	Uncertainty	+/-1760		+/-2600							
Thorium-234	U	86.6	U	-123	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-341							
Tin-113	U	7.60	U	1.32	pCi/L	N/A		N/A			
	Uncertainty	+/-6.03		+/-6.17							
Uranium-235	U	-4.02	U	14.2	pCi/L	N/A		N/A			
	Uncertainty	+/-27.5		+/-28.3							
Uranium-238	U	86.6	U	-123	pCi/L	N/A		N/A			
	Uncertainty	+/-284		+/-341							
Yttrium-88	U	0.303	U	-4.9	pCi/L	N/A		N/A			
	Uncertainty	+/-4.16		+/-5.31							
Zinc-65	U	0.765	U	6.89	pCi/L	N/A		N/A			
	Uncertainty	+/-6.97		+/-5.59							
Zirconium-95	U	-0.959	U	-0.507	pCi/L	N/A		N/A			
	Uncertainty	+/-6.35		+/-7.98							
QC1203190146	LCS										
Actinium-228			U	-58.2	pCi/L					10/23/14	11:34
	Uncertainty			+/-1050							
Americium-241	1.10E+05			1.16E+05	pCi/L		105	(75%-125%)			
	Uncertainty			+/-3260							
Antimony-124			U	190	pCi/L						
	Uncertainty			+/-209							
Antimony-125			U	94.2	pCi/L						
	Uncertainty			+/-581							
Barium-133			U	-183	pCi/L						
	Uncertainty			+/-237							
Barium-140			U	31.1	pCi/L						
	Uncertainty			+/-132							
Beryllium-7			U	-1460	pCi/L						
	Uncertainty			+/-1800							
Bismuth-212			U	-2020	pCi/L						
	Uncertainty			+/-2740							
Bismuth-214			U	-118	pCi/L						
	Uncertainty			+/-355							
Cerium-139				598	pCi/L						
	Uncertainty			+/-210							
Cerium-141			U	-131	pCi/L						
	Uncertainty			+/-235							
Cerium-144			U	11.1	pCi/L						
	Uncertainty			+/-1080							
Cesium-134			U	61.6	pCi/L						
	Uncertainty										

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Cesium-136			U	+/-238 137	pCi/L				MJH1	10/23/14	11:34
	Uncertainty			+/-453							
Cesium-137	44700			44900	pCi/L		101	(75%-125%)			
	Uncertainty			+/-859							
Chromium-51			U	193	pCi/L						
	Uncertainty			+/-1610							
Cobalt-56			U	-80.8	pCi/L						
	Uncertainty			+/-294							
Cobalt-57				3470	pCi/L						
	Uncertainty			+/-257							
Cobalt-58			U	-124	pCi/L						
	Uncertainty			+/-228							
Cobalt-60	54000			54800	pCi/L		101	(75%-125%)			
	Uncertainty			+/-1100							
Europium-152			U	-379	pCi/L						
	Uncertainty			+/-532							
Europium-154			U	199	pCi/L						
	Uncertainty			+/-361							
Europium-155			U	293	pCi/L						
	Uncertainty			+/-550							
Iridium-192			U	46.2	pCi/L						
	Uncertainty			+/-176							
Iron-59			U	-199	pCi/L						
	Uncertainty			+/-538							
Lead-210				1.21E+06	pCi/L						
	Uncertainty			+/-1.22E+05							
Lead-212			U	107	pCi/L						
	Uncertainty			+/-306							
Lead-214			U	208	pCi/L						
	Uncertainty			+/-408							
Manganese-54			U	60.1	pCi/L						
	Uncertainty			+/-232							
Mercury-203			U	121	pCi/L						
	Uncertainty			+/-209							
Neodymium-147			U	44.0	pCi/L						
	Uncertainty			+/-1660							
Neptunium-239			U	754	pCi/L						
	Uncertainty			+/-1580							
Niobium-94			U	-45.8	pCi/L						
	Uncertainty			+/-196							
Niobium-95			U	1.36	pCi/L						
	Uncertainty			+/-208							

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Potassium-40			U	-501	pCi/L						
	Uncertainty			+/-872							
Promethium-144			U	-91	pCi/L				MJH1	10/23/14	11:34
	Uncertainty			+/-204							
Promethium-146			U	59.6	pCi/L						
	Uncertainty			+/-274							
Radium-228			U	-58.2	pCi/L						
	Uncertainty			+/-1050							
Ruthenium-106			U	-437	pCi/L						
	Uncertainty			+/-1730							
Silver-110m			U	347	pCi/L						
	Uncertainty			+/-238							
Sodium-22			U	68.9	pCi/L						
	Uncertainty			+/-127							
Thallium-208			U	-143	pCi/L						
	Uncertainty			+/-180							
Thorium-230			U	46800	pCi/L						
	Uncertainty			+/-91600							
Thorium-234			U	-18000	pCi/L						
	Uncertainty			+/-12800							
Tin-113			U	336	pCi/L						
	Uncertainty			+/-379							
Uranium-235			U	-714	pCi/L						
	Uncertainty			+/-922							
Uranium-238			U	-18000	pCi/L						
	Uncertainty			+/-12800							
Yttrium-88				398	pCi/L						
	Uncertainty			+/-150							
Zinc-65				11100	pCi/L						
	Uncertainty			+/-1130							
Zirconium-95			U	-53.1	pCi/L						
	Uncertainty			+/-372							
QC1203190144	MB										
Actinium-228			U	-4.55	pCi/L					10/23/14	11:27
	Uncertainty			+/-20.2							
Americium-241			U	-23.8	pCi/L						
	Uncertainty			+/-29.3							
Antimony-124			U	0.0429	pCi/L						
	Uncertainty			+/-13.2							
Antimony-125			U	-5.42	pCi/L						
	Uncertainty			+/-12.3							
Barium-133			U	-0.708	pCi/L						
	Uncertainty			+/-6.09							
Barium-140			U	4.06	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Beryllium-7			U	+/-7.70 -21.6	pCi/L				MJH1	10/23/14	11:27
	Uncertainty			+/-37.5							
Bismuth-212			U	-13.7	pCi/L						
	Uncertainty			+/-75.5							
Bismuth-214			U	-3.84	pCi/L						
	Uncertainty			+/-11.1							
Cerium-139			U	-0.779	pCi/L						
	Uncertainty			+/-3.34							
Cerium-141			U	1.87	pCi/L						
	Uncertainty			+/-6.50							
Cerium-144			U	-7.61	pCi/L						
	Uncertainty			+/-21.4							
Cesium-134			U	7.61	pCi/L						
	Uncertainty			+/-4.41							
Cesium-136			U	-1.11	pCi/L						
	Uncertainty			+/-9.09							
Cesium-137			U	4.19	pCi/L						
	Uncertainty			+/-4.64							
Chromium-51			U	34.2	pCi/L						
	Uncertainty			+/-49.2							
Cobalt-56			U	0.747	pCi/L						
	Uncertainty			+/-5.19							
Cobalt-57			U	0.154	pCi/L						
	Uncertainty			+/-2.57							
Cobalt-58			U	-0.769	pCi/L						
	Uncertainty			+/-4.58							
Cobalt-60			U	-2.71	pCi/L						
	Uncertainty			+/-5.38							
Europium-152			U	6.32	pCi/L						
	Uncertainty			+/-13.0							
Europium-154			U	-0.0545	pCi/L						
	Uncertainty			+/-14.3							
Europium-155			U	-17.5	pCi/L						
	Uncertainty			+/-14.1							
Iridium-192			U	2.10	pCi/L						
	Uncertainty			+/-5.54							
Iron-59			U	1.39	pCi/L						
	Uncertainty			+/-8.62							
Lead-210			U	1170	pCi/L						
	Uncertainty			+/-1540							
Lead-212			U	-0.533	pCi/L						
	Uncertainty			+/-8.94							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Lead-214			U	1.50	pCi/L						
	Uncertainty			+/-17.2							
Manganese-54			U	1.61	pCi/L				MJH1	10/23/14	11:27
	Uncertainty			+/-4.70							
Mercury-203			U	-1.47	pCi/L						
	Uncertainty			+/-4.11							
Neodymium-147			U	-5.06	pCi/L						
	Uncertainty			+/-33.9							
Neptunium-239			U	4.32	pCi/L						
	Uncertainty			+/-34.0							
Niobium-94			U	2.38	pCi/L						
	Uncertainty			+/-4.75							
Niobium-95			U	-1.5	pCi/L						
	Uncertainty			+/-4.16							
Potassium-40			U	-44.7	pCi/L						
	Uncertainty			+/-69.3							
Promethium-144			U	-1.67	pCi/L						
	Uncertainty			+/-4.84							
Promethium-146			U	-4.15	pCi/L						
	Uncertainty			+/-6.17							
Radium-228			U	-4.55	pCi/L						
	Uncertainty			+/-20.2							
Ruthenium-106			U	66.4	pCi/L						
	Uncertainty			+/-36.4							
Silver-110m			U	-2.78	pCi/L						
	Uncertainty			+/-4.04							
Sodium-22			U	-0.0901	pCi/L						
	Uncertainty			+/-5.00							
Thallium-208			U	2.67	pCi/L						
	Uncertainty			+/-5.99							
Thorium-230			U	2.48	pCi/L						
	Uncertainty			+/-1650							
Thorium-234			U	-234	pCi/L						
	Uncertainty			+/-288							
Tin-113			U	-0.643	pCi/L						
	Uncertainty			+/-8.54							
Uranium-235			U	-2.89	pCi/L						
	Uncertainty			+/-25.9							
Uranium-238			U	-234	pCi/L						
	Uncertainty			+/-288							
Yttrium-88			U	1.09	pCi/L						
	Uncertainty			+/-5.71							
Zinc-65			U	0.961	pCi/L						
	Uncertainty			+/-10.2							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428415										
Zirconium-95			U	10.0	pCi/L						
	Uncertainty			+/-8.48							
Batch	1428419										
QC1203190151 358770021 DUP											
Actinium-228	U	-22.3	U	17.3	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-18.1		+/-19.7							
Americium-241	U	10.3	U	-51.1	pCi/L	N/A		N/A			
	Uncertainty	+/-24.2		+/-9.22							
Antimony-124	U	-9.23	U	5.91	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-12.4							
Antimony-125	U	9.77	U	8.57	pCi/L	N/A		N/A			
	Uncertainty	+/-18.8		+/-12.5							
Barium-133	U	0.0466	U	-7.29	pCi/L	N/A		N/A			
	Uncertainty	+/-5.99		+/-6.06							
Barium-140	U	3.76	U	1.63	pCi/L	N/A		N/A			
	Uncertainty	+/-11.4		+/-13.8							
Beryllium-7	U	34.6	U	19.3	pCi/L	N/A		N/A			
	Uncertainty	+/-45.5		+/-55.0							
Bismuth-212	U	-21.9	U	12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-60.4		+/-71.3							
Bismuth-214	UI	0.00	U	21.7	pCi/L	N/A		N/A			
	Uncertainty	+/-18.1		+/-15.4							
Cerium-139	U	-0.603	U	1.13	pCi/L	N/A		N/A			
	Uncertainty	+/-3.87		+/-3.80							
Cerium-141	U	-6.68	U	10.0	pCi/L	N/A		N/A			
	Uncertainty	+/-9.56		+/-8.16							
Cerium-144	U	16.9	U	29.3	pCi/L	N/A		N/A			
	Uncertainty	+/-27.5		+/-23.4							
Cesium-134	U	4.74	U	-1.63	pCi/L	N/A		N/A			
	Uncertainty	+/-4.24		+/-5.34							
Cesium-136	U	-6.19	U	-8.52	pCi/L	N/A		N/A			
	Uncertainty	+/-13.1		+/-15.8							
Cesium-137	U	-1.31	U	0.874	pCi/L	N/A		N/A			
	Uncertainty	+/-4.38		+/-5.20							
Chromium-51	U	10.4	U	21.6	pCi/L	N/A		N/A			
	Uncertainty	+/-48.8		+/-55.2							
Cobalt-56	U	-0.521	U	0.0451	pCi/L	N/A		N/A			
	Uncertainty	+/-4.32		+/-6.55							
Cobalt-57	U	-1.67	U	-0.324	pCi/L	N/A		N/A			
	Uncertainty	+/-3.30		+/-2.86							
Cobalt-58	U	0.161	U	-3.32	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-5.24							
Cobalt-60	U	1.95	U	-8.91	pCi/L	N/A		N/A			
	Uncertainty	+/-4.91		+/-6.02							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Europium-152	U	-2.24	U	2.84	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-13.5							
Europium-154	U	2.49	U	-2.42	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-13.5		+/-21.1							
Europium-155	U	-1.67	U	-11.5	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-13.4							
Iridium-192	U	1.34	U	1.26	pCi/L	N/A		N/A			
	Uncertainty	+/-4.69		+/-5.00							
Iron-59	U	-2.02	U	10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-10.8		+/-12.5							
Lead-210	U	695	U	-116	pCi/L	N/A		N/A			
	Uncertainty	+/-760		+/-99.1							
Lead-212	U	-1.1	U	4.46	pCi/L	N/A		N/A			
	Uncertainty	+/-9.43		+/-10.6							
Lead-214		21.0	U	-5.81	pCi/L	6.33		(0% - 100%)			
	Uncertainty	+/-16.2		+/-13.8							
Manganese-54	U	1.85	U	-0.42	pCi/L	N/A		N/A			
	Uncertainty	+/-4.59		+/-4.53							
Mercury-203	U	-3.63	U	-0.414	pCi/L	N/A		N/A			
	Uncertainty	+/-5.15		+/-5.94							
Neodymium-147	U	-40.4	U	-33.6	pCi/L	N/A		N/A			
	Uncertainty	+/-76.1		+/-105							
Neptunium-239	U	-7.87	U	-31.2	pCi/L	N/A		N/A			
	Uncertainty	+/-33.5		+/-29.4							
Niobium-94	U	-2.49	U	-2.96	pCi/L	N/A		N/A			
	Uncertainty	+/-3.92		+/-5.04							
Niobium-95	U	1.86	U	4.65	pCi/L	N/A		N/A			
	Uncertainty	+/-4.66		+/-8.58							
Potassium-40	U	-51.7	U	-50.1	pCi/L	N/A		N/A			
	Uncertainty	+/-73.7		+/-72.7							
Promethium-144	U	4.31	U	1.88	pCi/L	N/A		N/A			
	Uncertainty	+/-3.94		+/-6.82							
Promethium-146	U	-0.935	U	0.732	pCi/L	N/A		N/A			
	Uncertainty	+/-5.09		+/-5.44							
Radium-228	U	-22.3	U	17.3	pCi/L	N/A		N/A			
	Uncertainty	+/-18.1		+/-19.7							
Ruthenium-106	U	-12.8	U	-7.62	pCi/L	N/A		N/A			
	Uncertainty	+/-37.6		+/-48.0							
Silver-110m	U	-0.878	U	-0.985	pCi/L	N/A		N/A			
	Uncertainty	+/-4.02		+/-4.93							
Sodium-22	U	1.02	U	-0.699	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-7.47							
Thallium-208	U	-3.53	U	7.88	pCi/L	N/A		N/A			
	Uncertainty	+/-6.30		+/-6.89							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Thorium-230	U	791	U	482	pCi/L	N/A		N/A			
	Uncertainty	+/-1510		+/-616							
Thorium-234	U	14.8	U	-10.3	pCi/L	N/A		N/A	MJH1	10/25/14	11:54
	Uncertainty	+/-281		+/-112							
Tin-113	U	-0.447	U	-3.46	pCi/L	N/A		N/A			
	Uncertainty	+/-5.39		+/-6.28							
Uranium-235	U	-18.9	U	-21.9	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-28.1							
Uranium-238	U	14.8	U	-10.3	pCi/L	N/A		N/A			
	Uncertainty	+/-281		+/-112							
Yttrium-88	U	0.0457	U	0.762	pCi/L	N/A		N/A			
	Uncertainty	+/-5.21		+/-4.94							
Zinc-65	U	-9.23	U	-4.0	pCi/L	N/A		N/A			
	Uncertainty	+/-11.5		+/-13.0							
Zirconium-95	U	4.91	U	-14.4	pCi/L	N/A		N/A			
	Uncertainty	+/-7.97		+/-12.6							
QC1203190152	LCS										
Actinium-228			U	1050	pCi/L					10/24/14	07:06
	Uncertainty			+/-960							
Americium-241	1.10E+05			1.23E+05	pCi/L		112	(75%-125%)			
	Uncertainty			+/-3240							
Antimony-124			U	-83	pCi/L						
	Uncertainty			+/-182							
Antimony-125			U	201	pCi/L						
	Uncertainty			+/-497							
Barium-133			U	-389	pCi/L						
	Uncertainty			+/-210							
Barium-140			U	79.3	pCi/L						
	Uncertainty			+/-128							
Beryllium-7			U	989	pCi/L						
	Uncertainty			+/-1570							
Bismuth-212			U	-61.3	pCi/L						
	Uncertainty			+/-2500							
Bismuth-214			U	161	pCi/L						
	Uncertainty			+/-303							
Cerium-139				613	pCi/L						
	Uncertainty			+/-173							
Cerium-141			U	158	pCi/L						
	Uncertainty			+/-209							
Cerium-144			U	-195	pCi/L						
	Uncertainty			+/-912							
Cesium-134			U	-25.1	pCi/L						
	Uncertainty			+/-214							
Cesium-136			U	-6.7	pCi/L						
	Uncertainty										



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Cesium-137	44700			+/-406 46300	pCi/L		104	(75%-125%)	MJH1	10/24/14	07:06
	Uncertainty			+/-815							
Chromium-51			U	-247	pCi/L						
	Uncertainty			+/-1430							
Cobalt-56			U	100	pCi/L						
	Uncertainty			+/-224							
Cobalt-57				3660	pCi/L						
	Uncertainty			+/-240							
Cobalt-58			U	156	pCi/L						
	Uncertainty			+/-207							
Cobalt-60	54000			55800	pCi/L		103	(75%-125%)			
	Uncertainty			+/-978							
Europium-152			U	-523	pCi/L						
	Uncertainty			+/-474							
Europium-154			U	37.5	pCi/L						
	Uncertainty			+/-343							
Europium-155			U	132	pCi/L						
	Uncertainty			+/-510							
Iridium-192			U	118	pCi/L						
	Uncertainty			+/-167							
Iron-59			U	278	pCi/L						
	Uncertainty			+/-482							
Lead-210				1.41E+06	pCi/L						
	Uncertainty			+/-59700							
Lead-212			U	-23.2	pCi/L						
	Uncertainty			+/-302							
Lead-214			U	304	pCi/L						
	Uncertainty			+/-353							
Manganese-54			U	-55.7	pCi/L						
	Uncertainty			+/-204							
Mercury-203			U	51.7	pCi/L						
	Uncertainty			+/-161							
Neodymium-147			U	-161	pCi/L						
	Uncertainty			+/-1640							
Neptunium-239			U	-179	pCi/L						
	Uncertainty			+/-1460							
Niobium-94			U	172	pCi/L						
	Uncertainty			+/-127							
Niobium-95			U	-125	pCi/L						
	Uncertainty			+/-186							
Potassium-40			U	-62.6	pCi/L						
	Uncertainty			+/-814							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1428419										
Promethium-144			U	-108	pCi/L						
	Uncertainty			+/-155							
Promethium-146			U	156	pCi/L				MJH1	10/24/14	07:06
	Uncertainty			+/-244							
Radium-228			U	1050	pCi/L						
	Uncertainty			+/-960							
Ruthenium-106			U	-114	pCi/L						
	Uncertainty			+/-1540							
Silver-110m				957	pCi/L						
	Uncertainty			+/-216							
Sodium-22			U	5.88	pCi/L						
	Uncertainty			+/-121							
Thallium-208			U	16.0	pCi/L						
	Uncertainty			+/-162							
Thorium-230			U	89300	pCi/L						
	Uncertainty			+/-67500							
Thorium-234			U	-9120	pCi/L						
	Uncertainty			+/-8850							
Tin-113				411	pCi/L						
	Uncertainty			+/-285							
Uranium-235			U	-27.5	pCi/L						
	Uncertainty			+/-812							
Uranium-238			U	-9120	pCi/L						
	Uncertainty			+/-8850							
Yttrium-88				516	pCi/L						
	Uncertainty			+/-201							
Zinc-65				11400	pCi/L						
	Uncertainty			+/-969							
Zirconium-95			U	57.6	pCi/L						
	Uncertainty			+/-340							
QC1203190150	MB										
Actinium-228			U	1.26	pCi/L					10/24/14	07:06
	Uncertainty			+/-15.2							
Americium-241			U	-5.51	pCi/L						
	Uncertainty			+/-13.2							
Antimony-124			U	0.0381	pCi/L						
	Uncertainty			+/-7.37							
Antimony-125			U	-1.87	pCi/L						
	Uncertainty			+/-8.91							
Barium-133			U	-6.34	pCi/L						
	Uncertainty			+/-5.08							
Barium-140			U	1.95	pCi/L						
	Uncertainty			+/-4.94							
Beryllium-7			U	-9.87	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428419										
Bismuth-212	Uncertainty		U	+/-25.3	pCi/L				MJH1	10/24/14	07:06
				22.6							
Bismuth-214	Uncertainty		U	+/-49.9	pCi/L						
				-6.45							
Cerium-139	Uncertainty		U	+/-9.09	pCi/L						
				0.266							
Cerium-141	Uncertainty		U	+/-2.82	pCi/L						
				-1.38							
Cerium-144	Uncertainty		U	+/-6.26	pCi/L						
				15.3							
Cesium-134	Uncertainty		U	+/-18.8	pCi/L						
				1.51							
Cesium-136	Uncertainty		U	+/-3.85	pCi/L						
				-0.154							
Cesium-137	Uncertainty		U	+/-5.59	pCi/L						
				1.38							
Chromium-51	Uncertainty		U	+/-7.04	pCi/L						
				-7.06							
Cobalt-56	Uncertainty		U	+/-27.3	pCi/L						
				0.970							
Cobalt-57	Uncertainty		U	+/-3.56	pCi/L						
				-0.781							
Cobalt-58	Uncertainty		U	+/-2.51	pCi/L						
				-1.95							
Cobalt-60	Uncertainty		U	+/-3.24	pCi/L						
				-0.458							
Europium-152	Uncertainty		U	+/-3.60	pCi/L						
				-1.34							
Europium-154	Uncertainty		U	+/-9.55	pCi/L						
				7.83							
Europium-155	Uncertainty		U	+/-10.3	pCi/L						
				-7.47							
Iridium-192	Uncertainty		U	+/-9.78	pCi/L						
				-1.24							
Iron-59	Uncertainty		U	+/-3.08	pCi/L						
				0.466							
Lead-210	Uncertainty		U	+/-6.96	pCi/L						
				-268							
Lead-212	Uncertainty		U	+/-384	pCi/L						
				-1.64							
Lead-214	Uncertainty		U	+/-6.68	pCi/L						
				2.05							
	Uncertainty			+/-9.55							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1428419										
Manganese-54			U	1.16	pCi/L						
	Uncertainty			+/-3.39							
Mercury-203			U	0.248	pCi/L				MJH1	10/24/14	07:06
	Uncertainty			+/-3.17							
Neodymium-147			U	6.92	pCi/L						
	Uncertainty			+/-30.9							
Neptunium-239			U	-7.34	pCi/L						
	Uncertainty			+/-26.7							
Niobium-94			U	-0.743	pCi/L						
	Uncertainty			+/-3.56							
Niobium-95			U	-3.84	pCi/L						
	Uncertainty			+/-4.23							
Potassium-40			U	-62.7	pCi/L						
	Uncertainty			+/-43.0							
Promethium-144			U	2.56	pCi/L						
	Uncertainty			+/-3.76							
Promethium-146			U	4.60	pCi/L						
	Uncertainty			+/-4.85							
Radium-228			U	1.26	pCi/L						
	Uncertainty			+/-15.2							
Ruthenium-106			U	-13.5	pCi/L						
	Uncertainty			+/-29.3							
Silver-110m			U	-1.85	pCi/L						
	Uncertainty			+/-3.81							
Sodium-22			U	2.59	pCi/L						
	Uncertainty			+/-3.58							
Thallium-208			UI	0.00	pCi/L						
	Uncertainty			+/-5.66							
Thorium-230			U	-1340	pCi/L						
	Uncertainty			+/-1120							
Thorium-234			U	-147	pCi/L						
	Uncertainty			+/-138							
Tin-113			U	0.143	pCi/L						
	Uncertainty			+/-4.01							
Uranium-235			U	2.02	pCi/L						
	Uncertainty			+/-20.8							
Uranium-238			U	-147	pCi/L						
	Uncertainty			+/-138							
Yttrium-88			U	-0.399	pCi/L						
	Uncertainty			+/-3.62							
Zinc-65			U	-3.83	pCi/L						
	Uncertainty			+/-7.93							
Zirconium-95			U	-1.62	pCi/L						
	Uncertainty			+/-6.59							

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## QC Summary

Workorder: 358770

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1430824										
QC1203196244	358770001	DUP									
Alpha	U	4.05	U	-1.29	pCi/L	N/A		N/A	JXH3	11/04/14	17:24
	Uncertainty	+/-3.50		+/-1.93							
Beta		15.5		15.9	pCi/L	2.75		(0% - 100%)			
	Uncertainty	+/-4.09		+/-3.68							
QC1203196247	LCS										
Alpha	122			140	pCi/L		115	(75%-125%)		11/04/14	17:27
	Uncertainty			+/-12.7							
Beta	478			546	pCi/L		114	(75%-125%)			
	Uncertainty			+/-18.8							
QC1203196243	MB										
Alpha			U	-0.72	pCi/L					11/04/14	17:23
	Uncertainty			+/-1.33							
Beta			U	-2.2	pCi/L						
	Uncertainty			+/-1.92							
QC1203196245	358770001	MS									
Alpha	608 U	4.05		723	pCi/L		119	(75%-125%)		11/07/14	09:03
	Uncertainty	+/-3.50		+/-69.4							
Beta	2390	15.5		2810	pCi/L		117	(75%-125%)			
	Uncertainty	+/-4.09		+/-97.2							
QC1203196246	358770001	MSD									
Alpha	608 U	4.05		749	pCi/L	3.51	123	(0%-20%)		11/04/14	17:25
	Uncertainty	+/-3.50		+/-66.4							
Beta	2390	15.5		2850	pCi/L	1.51	119	(0%-20%)			
	Uncertainty	+/-4.09		+/-96.0							
Batch	1430825										
QC1203196249	358770021	DUP									
Alpha	U	-0.325	U	-0.44	pCi/L	N/A		N/A	JXH3	11/03/14	16:50
	Uncertainty	+/-2.02		+/-2.01							
Beta		5.26	U	2.39	pCi/L	75.0		(0% - 100%)			
	Uncertainty	+/-2.71		+/-2.57							
QC1203196252	LCS										
Alpha	122			144	pCi/L		118	(75%-125%)		11/04/14	13:17
	Uncertainty			+/-13.4							
Beta	478			554	pCi/L		116	(75%-125%)			
	Uncertainty			+/-19.0							
QC1203196248	MB										
Alpha			U	-0.855	pCi/L					11/03/14	16:53
	Uncertainty			+/-1.83							
Beta			U	-1.21	pCi/L						
	Uncertainty			+/-2.27							
QC1203196250	358770021	MS									
Alpha	486 U	-0.325		606	pCi/L		125	(75%-125%)		11/03/14	16:51
	Uncertainty	+/-2.02		+/-58.3							
Beta	1910	5.26		2340	pCi/L		122	(75%-125%)			
	Uncertainty	+/-2.71		+/-79.9							
QC1203196251	358770021	MSD									

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## QC Summary

Workorder: 358770

Page 16 of 17

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1430825										
Alpha	486	U	-0.325	574	pCi/L	5.37	118	(0%-20%)		11/04/14	11:55
	Uncertainty		+/-2.02	+/-55.5							
Beta	1910		5.26	2220	pCi/L	5.53	116	(0%-20%)	JXH3		
	Uncertainty		+/-2.71	+/-75.1							
<b>Rad Liquid Scintillation</b>											
Batch	1429883										
QC1203193781	358770017	DUP									
Technetium-99		U	8.57	U	-3.88	pCi/L	N/A		N/AMYM1	11/02/14	16:24
		Uncertainty	+/-122		+/-119						
QC1203193782	LCS										
Technetium-99			4340		3720	pCi/L	85.5	(75%-125%)		11/02/14	16:40
			Uncertainty		+/-228						
QC1203193780	MB										
Technetium-99				U	-6.43	pCi/L				11/02/14	16:07
			Uncertainty		+/-120						
Batch	1434030										
QC1203204238	358770001	DUP									
Technetium-99		U	39.5	U	-36.1	pCi/L	N/A		N/A GXR1	11/07/14	07:05
		Uncertainty	+/-122		+/-118						
QC1203204239	LCS										
Technetium-99			4340		4560	pCi/L	105	(75%-125%)		11/07/14	07:22
			Uncertainty		+/-258						
QC1203204237	MB										
Technetium-99				U	2.27	pCi/L				11/07/14	06:48
			Uncertainty		+/-130						

### 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 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

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## QC Summary

Workorder: 358770

Page 17 of 17

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**



**List of current GEL Certifications as of 07 November 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



February 17, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 365772

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 26, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C. 29061

365772

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/12/15 10:34	1000	X	X	X		X	REC
WELL	#3A	1/21/15 11:36	1000	X	X	X		X	REC
WELL	#7	1/19/15 13:56	1000	X	X	X		X	REC
WELL	#10	1/19/15 14:15	1000	X	X	X		X	REC
WELL	#13R	1/19/15 11:39	1000	X	X	X		X	REC
WELL	#14	1/20/15 14:27	1000	X	X	X		X	REC
WELL	#15	1/20/15 11:14	1000	X	X	X		X	REC
WELL	#16	1/20/15 11:33	1000	X	X	X		X	REC
WELL	#17	1/20/15 09:20	1000	X	X	X		X	REC
WELL	#18	1/19/15 10:38	1000	X	X	X		X	REC
WELL	#20	1/21/15 10:40	1000	X	X	X		X	REC
WELL	#22	1/19/15 10:16	1000	X	X	X		X	REC
WELL	#23R	1/20/15 14:03	1000	X	X	X		X	REC
WELL	#24	1/20/15 08:45	1000	X	X	X		X	REC
WELL	#26	1/12/15 10:12	1000	X	X	X		X	REC
WELL	#27	1/21/14 11:05	1000	X	X	X		X	REC
WELL	#28	1/19/15 11:14	1000	X	X	X		X	REC
WELL	#29	1/19/15 09:33	1000	X	X	X		X	REC
WELL	#30	1/19/15 09:53	1000	X	X	X		X	REC
WELL	#32	1/19/15 14:38	1000	X	X	X		X	REC
WELL	#33	1/20/15 10:26	1000	X	X	X		X	REC
WELL	#38	1/19/15 09:05	1000	X	X	X		X	REC
WELL	#39	1/20/15 09:44	1000	X	X	X		X	REC
WELL	#41R	1/12/15 10:52	1000	X	X	X		X	REC
WELL	#43	1/20/15 10:07	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/23/15

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## Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

Year: **2015**

365772

[illegible]

Rec'd: *Harold* 2650N15 0925

Electronically approved records are authenticated in the electronic document management system

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Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WESTINGHOUSE</u>		SDG/AR/COC/Work Order: <u>365772, 365773</u>	
Received By: <u>GUS CHANDLER</u>		Date Received: <u>26 JAN 15</u>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>	
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice None Other (describe) <u>13°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462966</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other  <u>1Z 222 210 03 9024 5392</u> <u>1Z 222 210 03 9012 5986</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 365772 GEL Work Order: 365772

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365772001  
Matrix: Water  
Collect Date: 12-JAN-15 10:34  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	6.01	+/-14.1	27.4		pCi/L		MJH1	01/29/15	1351 1453371	1
Americium-241	U	-10.8	+/-30.3	47.5		pCi/L					
Antimony-124	U	2.00	+/-9.37	19.3		pCi/L					
Antimony-125	U	-2.08	+/-8.54	15.0		pCi/L					
Barium-133	U	0.623	+/-6.11	8.21		pCi/L					
Barium-140	U	7.03	+/-30.0	54.9		pCi/L					
Beryllium-7	U	-8.47	+/-37.0	64.3		pCi/L					
Bismuth-212	U	-17.7	+/-57.9	86.2		pCi/L					
Bismuth-214	U	9.84	+/-11.1	15.5		pCi/L					
Cerium-139	U	-0.381	+/-3.86	5.77		pCi/L					
Cerium-141	U	0.731	+/-8.79	13.4		pCi/L					
Cerium-144	U	-8.79	+/-21.6	36.2		pCi/L					
Cesium-134	U	-0.973	+/-3.65	6.63		pCi/L					
Cesium-136	U	-5.57	+/-12.0	19.2		pCi/L					
Cesium-137	U	-2.77	+/-3.40	5.83	10.0	pCi/L					
Chromium-51	U	2.39	+/-45.1	81.0		pCi/L					
Cobalt-56	U	1.39	+/-4.01	7.75		pCi/L					
Cobalt-57	U	0.0838	+/-2.89	5.00		pCi/L					
Cobalt-58	U	-0.687	+/-3.48	6.41		pCi/L					
Cobalt-60	U	5.59	+/-3.40	6.33		pCi/L					
Europium-152	U	-2.22	+/-10.7	18.8		pCi/L					
Europium-154	U	4.59	+/-9.84	20.7		pCi/L					
Europium-155	U	-1.31	+/-12.0	20.6		pCi/L					
Iridium-192	U	-0.426	+/-3.77	6.73		pCi/L					
Iron-59	U	2.73	+/-7.99	15.7		pCi/L					
Lead-210	U	431	+/-1290	2030		pCi/L					
Lead-212	U	1.09	+/-7.70	12.1		pCi/L					
Lead-214	U	10.8	+/-13.2	15.9		pCi/L					
Manganese-54	U	1.02	+/-3.60	6.91		pCi/L					
Mercury-203	U	4.20	+/-4.16	7.97		pCi/L					
Neodymium-147	U	-33.8	+/-66.0	111		pCi/L					
Neptunium-239	U	-16.3	+/-28.8	48.0		pCi/L					
Niobium-94	U	-2.35	+/-4.01	5.93		pCi/L					
Niobium-95	U	2.14	+/-4.07	7.99		pCi/L					
Potassium-40	U	-40.6	+/-56.2	92.0		pCi/L					
Promethium-144	U	4.17	+/-4.33	6.84		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365772001

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.251	+/-4.76	8.49	pCi/L
Radium-228	U	6.01	+/-14.1	27.4	pCi/L
Ruthenium-106	U	1.04	+/-30.0	56.6	pCi/L
Silver-110m	U	2.43	+/-3.18	6.45	pCi/L
Sodium-22	U	1.82	+/-3.51	7.42	pCi/L
Thallium-208	U	2.65	+/-6.45	6.27	pCi/L
Thorium-230	U	770	+/-2010	3080	pCi/L
Thorium-234	U	-306	+/-252	392	pCi/L
Tin-113	U	4.31	+/-4.49	8.72	pCi/L
Uranium-235	U	12.8	+/-31.3	41.6	pCi/L
Uranium-238	U	-306	+/-252	392	pCi/L
Yttrium-88	U	3.03	+/-4.64	10.0	pCi/L
Zinc-65	U	13.3	+/-7.16	14.4	pCi/L
Zirconium-95	U	4.91	+/-6.57	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.15	+/-2.46	4.26	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta		11.5	+/-3.34	3.77	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	22.9	+/-131	227	300	pCi/L	MYM1	02/10/15	0551	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	365772002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:36		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.7	+/-19.3	33.9		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	-2.95	+/-32.3	54.9		pCi/L					
Antimony-124	U	3.80	+/-9.84	20.0		pCi/L					
Antimony-125	U	0.964	+/-10.1	17.9		pCi/L					
Barium-133	U	-4.25	+/-5.64	7.40		pCi/L					
Barium-140	U	6.67	+/-18.4	35.2		pCi/L					
Beryllium-7	U	0.850	+/-31.3	57.9		pCi/L					
Bismuth-212	U	12.1	+/-49.5	93.2		pCi/L					
Bismuth-214		49.1	+/-13.4	13.4		pCi/L					
Cerium-139	U	-1.6	+/-3.62	5.50		pCi/L					
Cerium-141	U	-0.185	+/-6.34	11.0		pCi/L					
Cerium-144	U	-5.42	+/-22.9	40.6		pCi/L					
Cesium-134	U	-0.429	+/-4.12	7.46		pCi/L					
Cesium-136	U	-1.51	+/-7.32	13.1		pCi/L					
Cesium-137	U	-0.224	+/-3.95	7.20	10.0	pCi/L					
Chromium-51	U	6.21	+/-35.4	63.1		pCi/L					
Cobalt-56	U	-0.0785	+/-3.79	6.94		pCi/L					
Cobalt-57	U	-0.656	+/-2.81	5.00		pCi/L					
Cobalt-58	U	-1.21	+/-3.71	6.55		pCi/L					
Cobalt-60	U	-3.5	+/-3.76	5.44		pCi/L					
Europium-152	U	-6.89	+/-11.1	17.7		pCi/L					
Europium-154	U	4.80	+/-11.6	23.3		pCi/L					
Europium-155	U	8.94	+/-12.4	23.1		pCi/L					
Iridium-192	U	-1.17	+/-3.67	6.31		pCi/L					
Iron-59	U	-5.06	+/-7.60	13.3		pCi/L					
Lead-210	U	-106	+/-1300	2130		pCi/L					
Lead-212	U	6.38	+/-10.4	12.0		pCi/L					
Lead-214		55.0	+/-16.2	13.8		pCi/L					
Manganese-54	U	1.21	+/-3.61	6.85		pCi/L					
Mercury-203	U	-0.0745	+/-3.86	6.79		pCi/L					
Neodymium-147	U	-29.7	+/-35.1	60.1		pCi/L					
Neptunium-239	U	-11.9	+/-33.9	52.6		pCi/L					
Niobium-94	U	-1.02	+/-3.75	6.64		pCi/L					
Niobium-95	U	3.83	+/-4.16	8.19		pCi/L					
Potassium-40	U	-7.45	+/-57.3	96.1		pCi/L					
Promethium-144	U	-0.294	+/-4.03	7.25		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A  
Sample ID: 365772002

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.93	+/-4.70	8.50	pCi/L
Radium-228	U	18.7	+/-19.3	33.9	pCi/L
Ruthenium-106	U	0.720	+/-32.1	59.1	pCi/L
Silver-110m	U	1.23	+/-3.74	7.04	pCi/L
Sodium-22	U	1.62	+/-4.07	8.15	pCi/L
Thallium-208	U	0.879	+/-5.10	8.32	pCi/L
Thorium-230	U	779	+/-1910	3310	pCi/L
Thorium-234	U	-347	+/-312	501	pCi/L
Tin-113	U	-1.57	+/-4.66	7.95	pCi/L
Uranium-235	U	-20.5	+/-28.9	41.7	pCi/L
Uranium-238	U	-347	+/-312	501	pCi/L
Yttrium-88	U	3.72	+/-5.46	11.2	pCi/L
Zinc-65	U	6.52	+/-8.66	16.1	pCi/L
Zirconium-95	U	4.48	+/-6.47	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.587	+/-2.14	4.21	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	2.58	+/-2.13	3.33	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.2	+/-120	212	300	pCi/L	MYM1	02/10/15	0608	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365772003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 13:56		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.9	+/-22.5	31.8		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	14.5	+/-29.0	49.6		pCi/L					
Antimony-124	U	-5.44	+/-10.2	17.9		pCi/L					
Antimony-125	U	-5.94	+/-9.90	16.9		pCi/L					
Barium-133	U	-1.87	+/-7.74	8.45		pCi/L					
Barium-140	U	-10.9	+/-22.3	38.0		pCi/L					
Beryllium-7	U	4.17	+/-34.4	62.4		pCi/L					
Bismuth-212	U	-5.54	+/-48.3	90.1		pCi/L					
Bismuth-214		19.8	+/-14.0	12.8		pCi/L					
Cerium-139	U	-1.73	+/-3.19	5.31		pCi/L					
Cerium-141	U	0.668	+/-5.84	10.2		pCi/L					
Cerium-144	U	4.58	+/-21.8	38.4		pCi/L					
Cesium-134	U	1.20	+/-3.88	7.59		pCi/L					
Cesium-136	U	5.41	+/-9.04	18.1		pCi/L					
Cesium-137	UI	0.00	+/-5.91	6.18	10.0	pCi/L					
Chromium-51	U	-26.6	+/-34.7	59.4		pCi/L					
Cobalt-56	U	-4.05	+/-3.80	6.16		pCi/L					
Cobalt-57	U	0.319	+/-2.72	4.80		pCi/L					
Cobalt-58	U	-0.311	+/-3.47	6.51		pCi/L					
Cobalt-60	U	2.87	+/-4.08	8.73		pCi/L					
Europium-152	U	-7.1	+/-9.99	17.1		pCi/L					
Europium-154	U	6.88	+/-13.0	26.6		pCi/L					
Europium-155	U	7.15	+/-11.8	21.7		pCi/L					
Iridium-192	U	0.652	+/-3.63	6.69		pCi/L					
Iron-59	U	2.46	+/-7.49	14.9		pCi/L					
Lead-210	U	-1930	+/-1690	2400		pCi/L					
Lead-212	U	7.80	+/-11.0	13.1		pCi/L					
Lead-214	U	3.12	+/-12.9	17.8		pCi/L					
Manganese-54	U	-1.47	+/-3.77	6.73		pCi/L					
Mercury-203	U	2.49	+/-3.60	6.90		pCi/L					
Neodymium-147	U	-0.283	+/-48.1	86.2		pCi/L					
Neptunium-239	U	-7.0	+/-37.8	53.4		pCi/L					
Niobium-94	U	-1.05	+/-3.19	5.80		pCi/L					
Niobium-95	U	-0.561	+/-4.54	7.40		pCi/L					
Potassium-40	U	29.3	+/-57.4	103		pCi/L					
Promethium-144	U	3.96	+/-3.82	7.76		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 7  
Sample ID: 365772003  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.639	+/-4.52	8.05	pCi/L
Radium-228	U	11.9	+/-22.5	31.8	pCi/L
Ruthenium-106	U	25.0	+/-33.2	64.4	pCi/L
Silver-110m	U	-0.121	+/-3.33	5.54	pCi/L
Sodium-22	U	2.42	+/-4.58	9.37	pCi/L
Thallium-208	U	6.38	+/-4.24	6.46	pCi/L
Thorium-230	U	277	+/-1790	2920	pCi/L
Thorium-234	U	79.6	+/-356	428	pCi/L
Tin-113	U	-1.11	+/-4.67	8.28	pCi/L
Uranium-235	U	21.5	+/-22.4	37.7	pCi/L
Uranium-238	U	79.6	+/-356	428	pCi/L
Yttrium-88	U	-0.735	+/-6.21	10.7	pCi/L
Zinc-65	U	-4.14	+/-9.13	13.3	pCi/L
Zirconium-95	U	-0.305	+/-6.81	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.51	+/-2.71	4.27	5.00	pCi/L	KXB2	02/15/15	1643	1457183	2
Beta		135	+/-3.58	1.61	5.00	pCi/L					
Alpha		6.84	+/-2.18	2.78	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta		140	+/-3.81	2.50	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	207	+/-131	214	300	pCi/L	MYM1	02/10/15	0625	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.5	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365772003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365772004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:15		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	19.0	+/-21.5	37.4		pCi/L		MJH1	01/30/15	0910 1453371	1
Americium-241	U	-4.68	+/-25.2	39.2		pCi/L					
Antimony-124	U	0.348	+/-10.2	20.2		pCi/L					
Antimony-125	U	-3.72	+/-12.5	21.2		pCi/L					
Barium-133	U	1.92	+/-5.52	8.83		pCi/L					
Barium-140	U	16.5	+/-21.2	42.2		pCi/L					
Beryllium-7	U	18.7	+/-33.3	64.4		pCi/L					
Bismuth-212	U	-14.5	+/-60.7	107		pCi/L					
Bismuth-214	U	18.3	+/-14.3	22.1		pCi/L					
Cerium-139	U	2.77	+/-3.53	6.59		pCi/L					
Cerium-141	U	-0.012	+/-7.31	12.3		pCi/L					
Cerium-144	U	0.188	+/-24.8	42.1		pCi/L					
Cesium-134	U	4.38	+/-4.44	8.91		pCi/L					
Cesium-136	U	1.68	+/-8.20	16.0		pCi/L					
Cesium-137	U	-1.49	+/-4.64	7.41	10.0	pCi/L					
Chromium-51	U	4.93	+/-41.5	73.8		pCi/L					
Cobalt-56	U	-1.93	+/-4.65	7.99		pCi/L					
Cobalt-57	U	-1.08	+/-3.21	5.37		pCi/L					
Cobalt-58	U	-1.39	+/-3.65	6.38		pCi/L					
Cobalt-60	U	1.27	+/-4.08	8.13		pCi/L					
Europium-152	U	-6.3	+/-12.5	20.4		pCi/L					
Europium-154	U	2.66	+/-12.3	23.9		pCi/L					
Europium-155	U	8.12	+/-12.8	22.7		pCi/L					
Iridium-192	U	-1.43	+/-4.17	7.19		pCi/L					
Iron-59	U	6.19	+/-8.49	17.4		pCi/L					
Lead-210	U	74.8	+/-747	1220		pCi/L					
Lead-212		13.8	+/-11.8	11.0		pCi/L					
Lead-214		22.2	+/-20.1	21.0		pCi/L					
Manganese-54	U	-3.66	+/-4.47	7.13		pCi/L					
Mercury-203	U	-1.18	+/-4.51	7.85		pCi/L					
Neodymium-147	U	1.72	+/-46.7	86.6		pCi/L					
Neptunium-239	U	6.05	+/-33.6	57.9		pCi/L					
Niobium-94	U	-1.74	+/-3.78	6.56		pCi/L					
Niobium-95	U	0.410	+/-4.02	7.42		pCi/L					
Potassium-40	U	60.4	+/-61.4	119		pCi/L					
Promethium-144	U	2.57	+/-3.80	7.36		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365772004	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.52	+/-5.56	8.59	pCi/L
Radium-228	U	19.0	+/-21.5	37.4	pCi/L
Ruthenium-106	U	-20.2	+/-36.0	62.4	pCi/L
Silver-110m	U	-1.08	+/-3.60	6.41	pCi/L
Sodium-22	U	0.797	+/-4.31	8.34	pCi/L
Thallium-208	U	-5.14	+/-5.23	8.31	pCi/L
Thorium-230	U	1160	+/-2010	2460	pCi/L
Thorium-234	U	149	+/-258	347	pCi/L
Tin-113	U	0.886	+/-5.16	9.18	pCi/L
Uranium-235	U	-9.41	+/-28.1	43.0	pCi/L
Uranium-238	U	149	+/-258	347	pCi/L
Yttrium-88	U	1.82	+/-4.32	9.26	pCi/L
Zinc-65	U	-2.47	+/-9.79	15.1	pCi/L
Zirconium-95	U	0.921	+/-6.83	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.17	+/-1.87	2.77	5.00	pCi/L	KXB2	02/15/15	1644	1457183	2
Beta	85.2	+/-3.08	2.63	5.00	pCi/L					
Alpha	3.32	+/-1.48	2.13	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	91.3	+/-2.86	1.53	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	149	+/-128	213	300	pCi/L	MYM1	02/10/15	0641	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 10  
Sample ID: 365772004

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 365772005  
Matrix: Water  
Collect Date: 19-JAN-15 11:39  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.25	+/-17.9	30.0		pCi/L		MJH1	01/30/15	0911 1453371	1
Americium-241	U	-1.54	+/-12.1	18.9		pCi/L					
Antimony-124	U	-6.98	+/-8.91	14.7		pCi/L					
Antimony-125	U	-3.24	+/-9.91	17.6		pCi/L					
Barium-133	U	-2.65	+/-5.52	9.19		pCi/L					
Barium-140	U	4.42	+/-20.9	38.6		pCi/L					
Beryllium-7	U	35.1	+/-34.1	66.0		pCi/L					
Bismuth-212	U	-23.7	+/-55.1	93.5		pCi/L					
Bismuth-214		20.0	+/-13.2	14.7		pCi/L					
Cerium-139	U	0.290	+/-2.97	5.34		pCi/L					
Cerium-141	U	5.41	+/-6.31	10.6		pCi/L					
Cerium-144	U	15.9	+/-20.8	36.4		pCi/L					
Cesium-134	U	-3.53	+/-4.87	7.04		pCi/L					
Cesium-136	U	10.8	+/-7.58	16.4		pCi/L					
Cesium-137	U	3.73	+/-4.14	7.94	10.0	pCi/L					
Chromium-51	U	-13.7	+/-36.4	61.7		pCi/L					
Cobalt-56	U	-1.02	+/-4.07	7.34		pCi/L					
Cobalt-57	U	-0.265	+/-2.60	4.38		pCi/L					
Cobalt-58	U	3.97	+/-4.87	5.64		pCi/L					
Cobalt-60	U	-0.222	+/-3.53	6.74		pCi/L					
Europium-152	U	9.92	+/-10.5	19.5		pCi/L					
Europium-154	U	-6.12	+/-10.2	17.9		pCi/L					
Europium-155	U	-12.8	+/-10.9	17.3		pCi/L					
Iridium-192	U	-1.93	+/-3.61	6.06		pCi/L					
Iron-59	U	2.52	+/-7.78	14.9		pCi/L					
Lead-210	U	238	+/-370	328		pCi/L					
Lead-212	U	7.15	+/-10.9	10.5		pCi/L					
Lead-214	U	3.34	+/-10.4	17.3		pCi/L					
Manganese-54	U	-0.139	+/-3.85	7.07		pCi/L					
Mercury-203	U	0.869	+/-4.08	7.21		pCi/L					
Neodymium-147	U	-12.9	+/-42.7	75.4		pCi/L					
Neptunium-239	U	-9.04	+/-27.5	45.8		pCi/L					
Niobium-94	U	-0.365	+/-3.43	6.05		pCi/L					
Niobium-95	U	-1.72	+/-3.62	6.44		pCi/L					
Potassium-40	U	45.9	+/-72.4	65.3		pCi/L					
Promethium-144	U	0.935	+/-3.83	6.93		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 365772005

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.20	+/-4.46	8.64	pCi/L
Radium-228	U	4.25	+/-17.9	30.0	pCi/L
Ruthenium-106	U	0.604	+/-32.5	58.4	pCi/L
Silver-110m	U	-5.43	+/-3.77	5.77	pCi/L
Sodium-22	U	-2.33	+/-3.55	6.20	pCi/L
Thallium-208	UI	0.00	+/-6.53	5.83	pCi/L
Thorium-230	U	684	+/-921	1510	pCi/L
Thorium-234	U	44.0	+/-185	211	pCi/L
Tin-113	U	-0.807	+/-4.74	8.54	pCi/L
Uranium-235	U	22.7	+/-32.7	38.0	pCi/L
Uranium-238	U	44.0	+/-185	211	pCi/L
Yttrium-88	U	0.00872	+/-4.54	8.85	pCi/L
Zinc-65	U	9.78	+/-7.85	11.9	pCi/L
Zirconium-95	U	-5.2	+/-7.07	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.64	+/-3.76	4.14	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	112	+/-8.92	3.82	5.00	pCi/L					
Alpha	4.31	+/-1.11	1.13	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	116	+/-3.16	1.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	214	+/-131	213	300	pCi/L	MYM1	02/10/15	0658	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.9	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 365772005

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365772006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 14:27		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.3	+/-21.1	24.1		pCi/L		MJH1	01/30/15	0913 1453371	1
Americium-241	U	2.90	+/-14.9	24.6		pCi/L					
Antimony-124	U	-7.89	+/-9.07	14.7		pCi/L					
Antimony-125	U	-1.46	+/-8.84	15.6		pCi/L					
Barium-133	U	-3.83	+/-4.67	6.75		pCi/L					
Barium-140	U	35.2	+/-43.2	38.6		pCi/L					
Beryllium-7	U	-17.9	+/-30.7	51.8		pCi/L					
Bismuth-212	U	-20.3	+/-56.4	85.3		pCi/L					
Bismuth-214	UI	0.00	+/-15.3	11.9		pCi/L					
Cerium-139	U	-0.331	+/-2.99	5.11		pCi/L					
Cerium-141	U	-3.01	+/-5.63	9.45		pCi/L					
Cerium-144	U	-5.84	+/-19.4	33.2		pCi/L					
Cesium-134	U	6.87	+/-4.22	8.18		pCi/L					
Cesium-136	U	1.52	+/-7.09	13.3		pCi/L					
Cesium-137	U	0.966	+/-6.80	5.92	10.0	pCi/L					
Chromium-51	U	9.03	+/-30.6	56.3		pCi/L					
Cobalt-56	U	-0.681	+/-3.77	6.76		pCi/L					
Cobalt-57	U	0.756	+/-2.61	4.61		pCi/L					
Cobalt-58	U	-2.63	+/-3.28	5.53		pCi/L					
Cobalt-60	U	-0.419	+/-3.92	7.31		pCi/L					
Europium-152	U	-3.13	+/-9.32	16.4		pCi/L					
Europium-154	U	-2.58	+/-9.80	18.1		pCi/L					
Europium-155	U	-1.44	+/-9.98	17.4		pCi/L					
Iridium-192	U	-1.66	+/-3.25	5.67		pCi/L					
Iron-59	U	-0.00386	+/-7.57	13.8		pCi/L					
Lead-210	U	171	+/-568	591		pCi/L					
Lead-212	U	2.63	+/-8.33	8.69		pCi/L					
Lead-214		23.2	+/-13.4	17.8		pCi/L					
Manganese-54	U	-1.29	+/-3.36	5.92		pCi/L					
Mercury-203	U	2.43	+/-3.63	6.40		pCi/L					
Neodymium-147	U	23.5	+/-38.3	65.3		pCi/L					
Neptunium-239	U	-30.2	+/-26.0	42.5		pCi/L					
Niobium-94	U	0.619	+/-3.29	6.14		pCi/L					
Niobium-95	U	0.563	+/-3.25	6.13		pCi/L					
Potassium-40	U	18.1	+/-46.8	82.9		pCi/L					
Promethium-144	U	-0.0932	+/-3.36	6.15		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365772006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.869	+/-4.02	7.04	pCi/L
Radium-228	U	10.3	+/-21.1	24.1	pCi/L
Ruthenium-106	U	2.35	+/-29.8	55.6	pCi/L
Silver-110m	U	2.60	+/-4.01	5.35	pCi/L
Sodium-22	U	-0.743	+/-3.47	6.46	pCi/L
Thallium-208	U	-3.94	+/-4.26	6.90	pCi/L
Thorium-230	U	493	+/-1410	1740	pCi/L
Thorium-234	U	78.9	+/-236	265	pCi/L
Tin-113	U	0.927	+/-4.20	7.42	pCi/L
Uranium-235	U	-20.8	+/-24.3	35.7	pCi/L
Uranium-238	U	78.9	+/-236	265	pCi/L
Yttrium-88	U	-2.07	+/-3.88	6.69	pCi/L
Zinc-65	U	3.79	+/-8.60	14.5	pCi/L
Zirconium-95	U	3.72	+/-6.19	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.167	+/-1.80	4.05	5.00	pCi/L	KXB2	02/16/15	0931	1457183	2
Beta	U	3.56	+/-2.99	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-13.7	+/-124	217	300	pCi/L	MYM1	02/10/15	0718	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.37	+/-17.0	27.1		pCi/L		MJH1	01/30/15	0913 1453371	1
Americium-241	U	-7.99	+/-11.1	19.2		pCi/L					
Antimony-124	U	2.22	+/-8.06	15.9		pCi/L					
Antimony-125	U	4.61	+/-8.51	16.0		pCi/L					
Barium-133	U	2.38	+/-4.45	7.38		pCi/L					
Barium-140	U	10.9	+/-19.8	33.3		pCi/L					
Beryllium-7	U	-15.5	+/-26.6	46.1		pCi/L					
Bismuth-212	U	-40	+/-46.1	76.0		pCi/L					
Bismuth-214		26.8	+/-13.4	11.7		pCi/L					
Cerium-139	U	-0.515	+/-3.01	5.21		pCi/L					
Cerium-141	U	4.20	+/-5.97	10.1		pCi/L					
Cerium-144	U	9.13	+/-18.7	33.7		pCi/L					
Cesium-134	U	1.86	+/-3.83	6.73		pCi/L					
Cesium-136	U	-1.13	+/-6.06	11.2		pCi/L					
Cesium-137	U	5.08	+/-4.77	5.66	10.0	pCi/L					
Chromium-51	U	-2.19	+/-34.2	58.5		pCi/L					
Cobalt-56	U	-0.317	+/-3.49	6.19		pCi/L					
Cobalt-57	U	0.738	+/-2.41	4.31		pCi/L					
Cobalt-58	U	-0.137	+/-3.56	6.35		pCi/L					
Cobalt-60	U	-3.34	+/-3.17	5.07		pCi/L					
Europium-152	U	-6.96	+/-9.76	16.0		pCi/L					
Europium-154	U	0.816	+/-9.48	18.0		pCi/L					
Europium-155	U	5.02	+/-10.9	17.5		pCi/L					
Iridium-192	U	0.680	+/-3.43	5.98		pCi/L					
Iron-59	U	-0.139	+/-6.77	12.7		pCi/L					
Lead-210	U	-101	+/-222	337		pCi/L					
Lead-212	U	0.00833	+/-7.04	11.2		pCi/L					
Lead-214		31.8	+/-12.0	18.1		pCi/L					
Manganese-54	U	-1.17	+/-3.12	5.39		pCi/L					
Mercury-203	U	-0.076	+/-3.54	6.11		pCi/L					
Neodymium-147	U	-7.87	+/-39.7	68.8		pCi/L					
Neptunium-239	U	-33.9	+/-25.6	42.3		pCi/L					
Niobium-94	U	2.28	+/-3.28	6.18		pCi/L					
Niobium-95	U	2.00	+/-3.15	6.05		pCi/L					
Potassium-40	U	0.0666	+/-50.4	87.5		pCi/L					
Promethium-144	U	1.15	+/-3.38	6.20		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.77	+/-4.08	7.16	pCi/L
Radium-228	U	7.37	+/-17.0	27.1	pCi/L
Ruthenium-106	U	7.26	+/-31.2	56.9	pCi/L
Silver-110m	U	1.31	+/-3.16	5.26	pCi/L
Sodium-22	U	0.287	+/-3.34	6.34	pCi/L
Thallium-208	U	-2.3	+/-4.14	6.36	pCi/L
Thorium-230	U	-244	+/-832	1470	pCi/L
Thorium-234	U	-54.3	+/-121	194	pCi/L
Tin-113	U	1.78	+/-4.04	7.55	pCi/L
Uranium-235	U	11.4	+/-22.1	35.1	pCi/L
Uranium-238	U	-54.3	+/-121	194	pCi/L
Yttrium-88	U	2.77	+/-3.55	7.76	pCi/L
Zinc-65	U	-3.49	+/-7.31	10.9	pCi/L
Zirconium-95	U	1.60	+/-5.86	10.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	5.34	+/-3.10	3.59	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta	207	+/-10.5	4.67	5.00	pCi/L					
Alpha	3.76	+/-0.951	0.941	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	196	+/-4.09	2.18	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	308	+/-133	211	300	pCi/L	MYM1	02/10/15	0735	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365772007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	365772008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.55	+/-12.5	25.0		pCi/L		MJH1	01/30/15	0913 1453371	1
Americium-241	U	-6.42	+/-30.3	47.8		pCi/L					
Antimony-124	U	-0.112	+/-8.18	16.3		pCi/L					
Antimony-125	U	0.681	+/-9.34	16.8		pCi/L					
Barium-133	U	-2.5	+/-4.99	7.41		pCi/L					
Barium-140	U	2.36	+/-19.4	35.3		pCi/L					
Beryllium-7	U	35.9	+/-29.9	55.6		pCi/L					
Bismuth-212	U	7.25	+/-58.3	92.2		pCi/L					
Bismuth-214		22.3	+/-15.2	11.9		pCi/L					
Cerium-139	U	2.37	+/-3.34	5.91		pCi/L					
Cerium-141	U	-2.24	+/-6.12	10.2		pCi/L					
Cerium-144	U	-11.4	+/-21.8	36.2		pCi/L					
Cesium-134	U	-2.03	+/-3.40	5.94		pCi/L					
Cesium-136	U	0.582	+/-9.28	14.7		pCi/L					
Cesium-137	U	-2.08	+/-4.05	7.16	10.0	pCi/L					
Chromium-51	U	-2.72	+/-36.9	65.8		pCi/L					
Cobalt-56	U	1.61	+/-3.79	7.39		pCi/L					
Cobalt-57	U	-0.205	+/-2.85	4.89		pCi/L					
Cobalt-58	U	3.64	+/-3.18	6.84		pCi/L					
Cobalt-60	U	0.227	+/-3.21	6.47		pCi/L					
Europium-152	U	7.11	+/-10.0	19.0		pCi/L					
Europium-154	U	-0.231	+/-9.17	16.0		pCi/L					
Europium-155	U	-2.76	+/-12.0	20.6		pCi/L					
Iridium-192	U	-1.46	+/-3.96	6.91		pCi/L					
Iron-59	U	11.0	+/-8.97	15.2		pCi/L					
Lead-210	U	282	+/-1240	1930		pCi/L					
Lead-212	U	8.88	+/-10.0	13.3		pCi/L					
Lead-214	UI	0.00	+/-16.0	20.0		pCi/L					
Manganese-54	U	0.0963	+/-3.79	6.19		pCi/L					
Mercury-203	U	2.24	+/-3.70	6.93		pCi/L					
Neodymium-147	U	-28.9	+/-38.2	62.5		pCi/L					
Neptunium-239	U	-9.29	+/-31.4	53.3		pCi/L					
Niobium-94	U	1.59	+/-3.39	6.57		pCi/L					
Niobium-95	U	1.95	+/-3.52	6.36		pCi/L					
Potassium-40	U	-13.5	+/-62.9	110		pCi/L					
Promethium-144	U	1.16	+/-3.54	6.77		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	365772008	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.712	+/-4.74	8.54	pCi/L
Radium-228	U	8.55	+/-12.5	25.0	pCi/L
Ruthenium-106	U	21.6	+/-33.6	66.0	pCi/L
Silver-110m	U	0.368	+/-3.51	6.62	pCi/L
Sodium-22	U	-0.0149	+/-3.24	5.67	pCi/L
Thallium-208	U	1.99	+/-5.12	6.56	pCi/L
Thorium-230	U	-2660	+/-2070	2870	pCi/L
Thorium-234	U	-220	+/-255	405	pCi/L
Tin-113	U	3.85	+/-4.86	9.19	pCi/L
Uranium-235	U	12.8	+/-25.9	38.2	pCi/L
Uranium-238	U	-220	+/-255	405	pCi/L
Yttrium-88	U	-0.478	+/-3.91	7.58	pCi/L
Zinc-65	U	-2.06	+/-9.10	16.2	pCi/L
Zirconium-95	U	1.27	+/-6.44	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	3.99	+/-3.05	4.07	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta		19.6	+/-4.21	3.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-57	+/-121	215	300	pCi/L	MYM1	02/10/15	0752	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365772009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:20		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.4	+/-18.0	29.1		pCi/L		MJH1	01/30/15	0914 1453371	1
Americium-241	U	30.2	+/-32.8	52.6		pCi/L					
Antimony-124	U	2.37	+/-8.71	17.9		pCi/L					
Antimony-125	U	2.48	+/-9.61	17.6		pCi/L					
Barium-133	U	3.54	+/-4.66	8.01		pCi/L					
Barium-140	U	6.70	+/-26.9	40.1		pCi/L					
Beryllium-7	U	-1.67	+/-33.4	59.0		pCi/L					
Bismuth-212	U	22.3	+/-55.2	105		pCi/L					
Bismuth-214		26.7	+/-17.1	14.4		pCi/L					
Cerium-139	U	1.84	+/-3.38	5.97		pCi/L					
Cerium-141	U	-1.19	+/-6.63	11.3		pCi/L					
Cerium-144	U	-9.05	+/-23.0	39.0		pCi/L					
Cesium-134	U	0.600	+/-4.71	8.68		pCi/L					
Cesium-136	U	2.11	+/-7.56	15.1		pCi/L					
Cesium-137	U	2.52	+/-3.62	7.21	10.0	pCi/L					
Chromium-51	U	17.7	+/-36.8	68.2		pCi/L					
Cobalt-56	U	-1.91	+/-4.13	6.39		pCi/L					
Cobalt-57	U	-0.627	+/-2.92	5.01		pCi/L					
Cobalt-58	U	-1.86	+/-4.30	7.50		pCi/L					
Cobalt-60	U	7.75	+/-4.99	10.9		pCi/L					
Europium-152	U	6.92	+/-10.8	19.8		pCi/L					
Europium-154	U	-1.77	+/-13.0	24.0		pCi/L					
Europium-155	U	1.16	+/-12.8	21.5		pCi/L					
Iridium-192	U	-1.51	+/-3.75	6.55		pCi/L					
Iron-59	U	0.158	+/-8.11	15.5		pCi/L					
Lead-210	U	-839	+/-1260	1990		pCi/L					
Lead-212	U	0.706	+/-9.64	14.0		pCi/L					
Lead-214		52.4	+/-15.1	23.0		pCi/L					
Manganese-54	U	-0.15	+/-3.35	6.18		pCi/L					
Mercury-203	U	-2.84	+/-3.92	6.74		pCi/L					
Neodymium-147	U	47.2	+/-59.9	78.3		pCi/L					
Neptunium-239	U	-7.57	+/-34.0	54.4		pCi/L					
Niobium-94	U	-1.4	+/-4.63	7.05		pCi/L					
Niobium-95	U	0.419	+/-4.31	7.95		pCi/L					
Potassium-40	U	-62.5	+/-51.5	80.5		pCi/L					
Promethium-144	U	-3.12	+/-3.88	6.36		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365772009	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.01	+/-4.65	7.77	pCi/L
Radium-228	U	-11.4	+/-18.0	29.1	pCi/L
Ruthenium-106	U	-4.17	+/-34.1	62.4	pCi/L
Silver-110m	U	-4.45	+/-3.76	5.29	pCi/L
Sodium-22	U	0.361	+/-4.43	8.46	pCi/L
Thallium-208	U	-1.24	+/-4.98	8.10	pCi/L
Thorium-230	U	1660	+/-2200	2860	pCi/L
Thorium-234	U	154	+/-315	439	pCi/L
Tin-113	U	0.0939	+/-4.44	7.97	pCi/L
Uranium-235	U	5.91	+/-23.5	41.0	pCi/L
Uranium-238	U	154	+/-315	439	pCi/L
Yttrium-88	U	-0.0631	+/-4.19	8.36	pCi/L
Zinc-65	U	0.503	+/-9.38	15.6	pCi/L
Zirconium-95	U	2.07	+/-7.30	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.00	+/-3.18	4.18	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta		491	+/-18.1	3.42	5.00	pCi/L					
Alpha		1.87	+/-0.784	0.980	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta		448	+/-6.01	1.73	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	734	+/-149	212	300	pCi/L	MYM1	02/10/15	0808	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 17  
Sample ID: 365772009

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365772010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	9.18	+/-26.3	34.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	2.06	+/-22.3	40.6		pCi/L					
Antimony-124	U	3.72	+/-10.8	21.6		pCi/L					
Antimony-125	U	1.39	+/-11.0	19.5		pCi/L					
Barium-133	U	-1.16	+/-6.09	8.67		pCi/L					
Barium-140	U	5.13	+/-22.8	42.6		pCi/L					
Beryllium-7	U	1.64	+/-39.3	60.1		pCi/L					
Bismuth-212	U	-53.5	+/-67.0	92.9		pCi/L					
Bismuth-214	U	12.9	+/-17.7	14.2		pCi/L					
Cerium-139	U	0.698	+/-3.52	6.07		pCi/L					
Cerium-141	U	5.31	+/-8.56	11.3		pCi/L					
Cerium-144	U	-0.351	+/-22.8	39.5		pCi/L					
Cesium-134	U	4.74	+/-4.23	8.47		pCi/L					
Cesium-136	U	2.80	+/-9.92	17.7		pCi/L					
Cesium-137	U	0.814	+/-4.17	7.68	10.0	pCi/L					
Chromium-51	U	-26.1	+/-38.1	64.7		pCi/L					
Cobalt-56	U	-1.8	+/-4.36	7.47		pCi/L					
Cobalt-57	U	-3.31	+/-2.95	4.86		pCi/L					
Cobalt-58	U	-1.94	+/-4.08	6.98		pCi/L					
Cobalt-60	U	4.36	+/-4.92	8.74		pCi/L					
Europium-152	U	-0.71	+/-11.2	19.8		pCi/L					
Europium-154	U	-8.07	+/-12.3	20.8		pCi/L					
Europium-155	U	-0.658	+/-12.4	21.6		pCi/L					
Iridium-192	U	1.68	+/-3.91	7.13		pCi/L					
Iron-59	UI	0.00	+/-16.8	15.6		pCi/L					
Lead-210	U	-94.3	+/-828	1200		pCi/L					
Lead-212	U	0.320	+/-11.3	12.9		pCi/L					
Lead-214	U	13.2	+/-16.0	19.1		pCi/L					
Manganese-54	U	1.62	+/-4.75	7.81		pCi/L					
Mercury-203	U	0.359	+/-4.20	7.53		pCi/L					
Neodymium-147	U	13.3	+/-45.3	85.4		pCi/L					
Neptunium-239	U	-30.5	+/-30.9	51.4		pCi/L					
Niobium-94	U	0.885	+/-3.37	6.28		pCi/L					
Niobium-95	U	2.81	+/-7.83	7.77		pCi/L					
Potassium-40	U	38.6	+/-77.8	66.5		pCi/L					
Promethium-144	U	1.68	+/-3.65	6.87		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 18 Project: WNUC00127  
Sample ID: 365772010 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.09	+/-5.48	8.72	pCi/L
Radium-228	U	9.18	+/-26.3	34.1	pCi/L
Ruthenium-106	U	18.8	+/-46.0	66.7	pCi/L
Silver-110m	U	0.139	+/-3.86	7.02	pCi/L
Sodium-22	U	-2.84	+/-4.35	7.34	pCi/L
Thallium-208	U	1.34	+/-7.30	6.94	pCi/L
Thorium-230	U	890	+/-1450	2660	pCi/L
Thorium-234	U	-270	+/-257	425	pCi/L
Tin-113	U	0.500	+/-5.15	9.12	pCi/L
Uranium-235	U	23.2	+/-29.3	45.1	pCi/L
Uranium-238	U	-270	+/-257	425	pCi/L
Yttrium-88	U	1.17	+/-4.57	9.18	pCi/L
Zinc-65	U	11.4	+/-11.6	14.5	pCi/L
Zirconium-95	U	-0.692	+/-7.45	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	14.3	+/-6.20	8.90	5.00	pCi/L	KXB2	02/15/15	1644	1457183	2
Beta	214	+/-8.57	7.68	5.00	pCi/L					
Alpha	21.2	+/-6.32	7.46	5.00	pCi/L	KXB2	02/16/15	1821	1457183	3
Beta	199	+/-7.12	3.65	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	336	+/-128	200	300	pCi/L	MYM1	02/10/15	1554	1453895	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365772010	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	365772011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 10:40		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-11.3	+/-17.9	30.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	7.92	+/-38.5	58.0		pCi/L					
Antimony-124	U	-10.1	+/-11.9	12.2		pCi/L					
Antimony-125	U	7.74	+/-10.0	18.9		pCi/L					
Barium-133	U	0.995	+/-5.60	8.75		pCi/L					
Barium-140	U	-4.95	+/-19.5	34.3		pCi/L					
Beryllium-7	U	9.87	+/-33.2	60.7		pCi/L					
Bismuth-212	U	28.0	+/-54.9	103		pCi/L					
Bismuth-214	U	4.49	+/-16.5	15.0		pCi/L					
Cerium-139	U	0.158	+/-3.40	6.05		pCi/L					
Cerium-141	U	4.08	+/-7.66	12.2		pCi/L					
Cerium-144	U	-0.988	+/-23.6	41.9		pCi/L					
Cesium-134	U	1.09	+/-3.84	7.17		pCi/L					
Cesium-136	U	2.79	+/-7.06	14.0		pCi/L					
Cesium-137	U	0.0653	+/-4.73	8.37	10.0	pCi/L					
Chromium-51	U	56.8	+/-50.3	62.0		pCi/L					
Cobalt-56	U	-0.747	+/-4.87	7.66		pCi/L					
Cobalt-57	U	0.459	+/-3.09	5.55		pCi/L					
Cobalt-58	U	0.841	+/-3.61	6.71		pCi/L					
Cobalt-60	U	0.605	+/-3.71	7.26		pCi/L					
Europium-152	U	11.8	+/-11.4	20.7		pCi/L					
Europium-154	U	9.11	+/-14.0	20.7		pCi/L					
Europium-155	U	11.2	+/-17.0	24.8		pCi/L					
Iridium-192	U	2.29	+/-4.52	7.25		pCi/L					
Iron-59	U	1.72	+/-8.23	15.8		pCi/L					
Lead-210	U	195	+/-1180	2020		pCi/L					
Lead-212	U	8.52	+/-10.2	11.1		pCi/L					
Lead-214		25.0	+/-16.9	20.0		pCi/L					
Manganese-54	U	-1.76	+/-3.82	6.82		pCi/L					
Mercury-203	U	-0.668	+/-4.15	7.09		pCi/L					
Neodymium-147	U	-11.6	+/-41.7	72.8		pCi/L					
Neptunium-239	U	-6.14	+/-32.7	57.9		pCi/L					
Niobium-94	U	0.775	+/-4.09	7.36		pCi/L					
Niobium-95	U	0.573	+/-4.29	7.73		pCi/L					
Potassium-40	U	-58.4	+/-47.0	85.1		pCi/L					
Promethium-144	U	-1.77	+/-3.92	6.67		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 20 Project: WNUC00127  
Sample ID: 365772011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.31	+/-4.80	8.96	pCi/L
Radium-228	U	-11.3	+/-17.9	30.1	pCi/L
Ruthenium-106	U	-15.9	+/-37.5	54.4	pCi/L
Silver-110m	U	0.984	+/-4.10	7.44	pCi/L
Sodium-22	U	3.21	+/-4.93	6.17	pCi/L
Thallium-208	U	1.90	+/-5.25	8.84	pCi/L
Thorium-230	UI	0.00	+/-2540	3470	pCi/L
Thorium-234	U	72.9	+/-401	436	pCi/L
Tin-113	U	-2.86	+/-4.88	8.31	pCi/L
Uranium-235	U	18.3	+/-31.6	44.5	pCi/L
Uranium-238	U	72.9	+/-401	436	pCi/L
Yttrium-88	U	0.175	+/-3.93	7.78	pCi/L
Zinc-65	U	1.21	+/-8.97	14.9	pCi/L
Zirconium-95	U	-1.41	+/-7.72	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.369	+/-1.96	4.01	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	0.724	+/-2.42	4.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	5.19	+/-125	217	300	pCi/L	MYM1	02/10/15	0841	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	365772012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:16		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.18	+/-16.8	28.1		pCi/L		MJH1	01/30/15	0928 1453371	1
Americium-241	U	20.2	+/-26.5	38.4		pCi/L					
Antimony-124	U	-5.45	+/-10.0	17.5		pCi/L					
Antimony-125	U	8.45	+/-10.7	19.8		pCi/L					
Barium-133	U	0.760	+/-6.00	9.15		pCi/L					
Barium-140	U	-10.3	+/-22.2	39.0		pCi/L					
Beryllium-7	U	1.50	+/-38.2	66.8		pCi/L					
Bismuth-212	U	6.50	+/-53.8	97.8		pCi/L					
Bismuth-214	U	15.4	+/-17.5	19.0		pCi/L					
Cerium-139	U	-0.167	+/-3.42	5.88		pCi/L					
Cerium-141	U	6.89	+/-8.40	12.5		pCi/L					
Cerium-144	U	-24.8	+/-29.0	41.1		pCi/L					
Cesium-134	U	3.66	+/-4.83	9.13		pCi/L					
Cesium-136	U	-1.87	+/-9.30	16.7		pCi/L					
Cesium-137	U	-0.963	+/-4.38	7.72	10.0	pCi/L					
Chromium-51	U	-25	+/-41.2	70.2		pCi/L					
Cobalt-56	U	-0.624	+/-6.48	8.59		pCi/L					
Cobalt-57	U	-2.8	+/-3.27	5.48		pCi/L					
Cobalt-58	U	1.09	+/-4.10	7.53		pCi/L					
Cobalt-60	U	-2.57	+/-4.39	7.43		pCi/L					
Europium-152	U	-11.9	+/-12.3	19.8		pCi/L					
Europium-154	U	2.69	+/-12.7	20.7		pCi/L					
Europium-155	U	-0.24	+/-14.9	22.6		pCi/L					
Iridium-192	U	2.05	+/-4.11	7.45		pCi/L					
Iron-59	U	0.983	+/-8.37	15.6		pCi/L					
Lead-210	U	-155	+/-709	981		pCi/L					
Lead-212	U	5.06	+/-15.2	13.5		pCi/L					
Lead-214	U	15.8	+/-12.3	18.9		pCi/L					
Manganese-54	U	-0.974	+/-4.00	6.98		pCi/L					
Mercury-203	U	3.27	+/-4.24	7.81		pCi/L					
Neodymium-147	U	46.1	+/-48.2	93.5		pCi/L					
Neptunium-239	U	-16.4	+/-35.0	59.8		pCi/L					
Niobium-94	U	-3.43	+/-3.95	6.55		pCi/L					
Niobium-95	U	2.53	+/-4.63	7.61		pCi/L					
Potassium-40	U	-5.72	+/-53.8	94.1		pCi/L					
Promethium-144	U	1.75	+/-4.99	7.93		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 22 Project: WNUC00127  
Sample ID: 365772012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.72	+/-6.42	9.80	pCi/L
Radium-228	U	7.18	+/-16.8	28.1	pCi/L
Ruthenium-106	U	7.19	+/-37.5	64.6	pCi/L
Silver-110m	U	1.83	+/-3.84	7.17	pCi/L
Sodium-22	U	0.946	+/-4.46	7.29	pCi/L
Thallium-208	U	-0.112	+/-5.09	8.12	pCi/L
Thorium-230	U	1320	+/-1460	2440	pCi/L
Thorium-234	U	57.7	+/-197	299	pCi/L
Tin-113	U	-3.16	+/-6.62	8.76	pCi/L
Uranium-235	U	39.7	+/-36.7	42.0	pCi/L
Uranium-238	U	57.7	+/-197	299	pCi/L
Yttrium-88	U	-0.207	+/-4.06	7.76	pCi/L
Zinc-65	U	4.19	+/-8.73	12.8	pCi/L
Zirconium-95	U	2.37	+/-7.12	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	7.25	+/-4.51	4.84	5.00	pCi/L	KXB2	02/16/15	0932	1457183	2
Beta	48.1	+/-5.93	3.27	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	29.0	+/-123	213	300	pCi/L	MYM1	02/10/15	0858	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 365772013  
Matrix: Water  
Collect Date: 20-JAN-15 14:03  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-18.9	+/-18.9	28.6		pCi/L		MJH1	01/30/15	0929 1453371	1
Americium-241	U	13.6	+/-21.9	36.0		pCi/L					
Antimony-124	U	-2.68	+/-9.28	17.2		pCi/L					
Antimony-125	U	10.4	+/-12.3	20.7		pCi/L					
Barium-133	U	2.85	+/-5.65	9.22		pCi/L					
Barium-140	U	3.33	+/-25.3	45.5		pCi/L					
Beryllium-7	U	38.5	+/-37.1	70.6		pCi/L					
Bismuth-212	U	-37.6	+/-67.4	95.3		pCi/L					
Bismuth-214		19.4	+/-14.0	14.3		pCi/L					
Cerium-139	U	-1.04	+/-3.50	6.00		pCi/L					
Cerium-141	U	-0.948	+/-6.82	11.8		pCi/L					
Cerium-144	U	-0.87	+/-26.2	44.1		pCi/L					
Cesium-134	U	-0.72	+/-4.55	7.47		pCi/L					
Cesium-136	U	-1.37	+/-9.91	15.4		pCi/L					
Cesium-137	U	-0.614	+/-4.95	7.97	10.0	pCi/L					
Chromium-51	U	-3.69	+/-46.7	72.8		pCi/L					
Cobalt-56	U	3.39	+/-4.74	8.24		pCi/L					
Cobalt-57	U	-1.92	+/-3.19	5.45		pCi/L					
Cobalt-58	U	1.91	+/-4.48	7.58		pCi/L					
Cobalt-60	U	-0.91	+/-3.75	6.43		pCi/L					
Europium-152	U	0.540	+/-12.8	21.9		pCi/L					
Europium-154	U	-3.8	+/-10.2	18.1		pCi/L					
Europium-155	U	6.51	+/-12.5	22.6		pCi/L					
Iridium-192	U	2.37	+/-3.77	7.58		pCi/L					
Iron-59	U	0.726	+/-7.60	14.3		pCi/L					
Lead-210	U	420	+/-989	848		pCi/L					
Lead-212	UI	0.00	+/-14.4	14.2		pCi/L					
Lead-214	U	16.5	+/-16.5	20.8		pCi/L					
Manganese-54	U	1.16	+/-5.10	8.25		pCi/L					
Mercury-203	U	-2.31	+/-4.46	7.39		pCi/L					
Neodymium-147	U	-12	+/-50.7	88.7		pCi/L					
Neptunium-239	U	-13.6	+/-34.6	59.6		pCi/L					
Niobium-94	U	1.81	+/-4.02	7.35		pCi/L					
Niobium-95	U	-2.84	+/-6.30	8.58		pCi/L					
Potassium-40	U	-37.5	+/-57.7	86.1		pCi/L					
Promethium-144	U	2.48	+/-4.22	7.78		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 365772013

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.91	+/-4.88	8.99	pCi/L
Radium-228	U	-18.9	+/-18.9	28.6	pCi/L
Ruthenium-106	U	1.79	+/-37.4	66.7	pCi/L
Silver-110m	U	-1.5	+/-4.12	7.07	pCi/L
Sodium-22	U	-1.95	+/-3.68	6.37	pCi/L
Thallium-208	U	-2.83	+/-5.00	7.35	pCi/L
Thorium-230	UI	0.00	+/-2200	2100	pCi/L
Thorium-234	U	110	+/-193	278	pCi/L
Tin-113	U	2.07	+/-5.61	10.2	pCi/L
Uranium-235	U	-1.12	+/-30.8	41.6	pCi/L
Uranium-238	U	110	+/-193	278	pCi/L
Yttrium-88	U	-0.0413	+/-3.09	6.26	pCi/L
Zinc-65	U	-3.73	+/-9.28	13.7	pCi/L
Zirconium-95	U	-1.49	+/-7.06	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.29	+/-2.51	4.61	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	0.302	+/-2.13	3.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	5.46	+/-120	208	300	pCi/L	MYM1	02/10/15	0914	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	365772014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 08:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	2.65	+/-23.7	39.5		pCi/L		MJH1	01/30/15	1002 1453371	1
Americium-241	U	-2.47	+/-6.84	10.0		pCi/L					
Antimony-124	U	2.77	+/-10.2	21.3		pCi/L					
Antimony-125	U	1.10	+/-9.95	18.3		pCi/L					
Barium-133	U	-0.816	+/-5.25	8.30		pCi/L					
Barium-140	U	14.0	+/-24.6	46.6		pCi/L					
Beryllium-7	U	-7.57	+/-36.7	65.0		pCi/L					
Bismuth-212	U	29.1	+/-62.7	122		pCi/L					
Bismuth-214		20.0	+/-16.8	16.4		pCi/L					
Cerium-139	U	-1.18	+/-2.86	4.89		pCi/L					
Cerium-141	U	-0.833	+/-5.38	9.40		pCi/L					
Cerium-144	U	12.6	+/-18.2	33.5		pCi/L					
Cesium-134	U	-1.53	+/-4.66	8.44		pCi/L					
Cesium-136	U	-9.53	+/-10.3	16.6		pCi/L					
Cesium-137	U	0.686	+/-4.64	8.41	10.0	pCi/L					
Chromium-51	U	39.3	+/-36.6	71.6		pCi/L					
Cobalt-56	U	-1.76	+/-4.97	8.87		pCi/L					
Cobalt-57	U	0.0612	+/-2.25	4.01		pCi/L					
Cobalt-58	U	2.71	+/-6.73	8.89		pCi/L					
Cobalt-60	U	3.07	+/-4.25	9.22		pCi/L					
Europium-152	U	-6.82	+/-10.6	18.5		pCi/L					
Europium-154	U	-0.748	+/-14.5	28.0		pCi/L					
Europium-155	U	-5.61	+/-9.69	15.6		pCi/L					
Iridium-192	U	-2.46	+/-3.62	6.33		pCi/L					
Iron-59	U	-2.61	+/-11.3	18.2		pCi/L					
Lead-210	U	12.0	+/-105	106		pCi/L					
Lead-212	U	0.526	+/-9.38	13.8		pCi/L					
Lead-214		22.7	+/-17.1	14.8		pCi/L					
Manganese-54	U	-2.12	+/-4.11	7.25		pCi/L					
Mercury-203	U	-0.072	+/-4.09	6.98		pCi/L					
Neodymium-147	U	6.90	+/-48.3	88.4		pCi/L					
Neptunium-239	U	7.65	+/-22.9	41.7		pCi/L					
Niobium-94	U	0.402	+/-4.14	7.81		pCi/L					
Niobium-95	U	3.08	+/-4.46	8.94		pCi/L					
Potassium-40	UI	0.00	+/-59.8	72.9		pCi/L					
Promethium-144	U	-2.29	+/-4.76	8.47		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 24

Sample ID: 365772014

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.35	+/-4.65	9.01	pCi/L
Radium-228	U	2.65	+/-23.7	39.5	pCi/L
Ruthenium-106	U	4.75	+/-39.3	71.0	pCi/L
Silver-110m	U	0.377	+/-4.61	7.29	pCi/L
Sodium-22	U	-0.183	+/-5.11	9.90	pCi/L
Thallium-208	U	4.87	+/-6.94	7.22	pCi/L
Thorium-230	U	579	+/-566	991	pCi/L
Thorium-234	UI	0.00	+/-113	99.5	pCi/L
Tin-113	U	-2.66	+/-4.72	8.20	pCi/L
Uranium-235	U	-11.3	+/-21.7	33.8	pCi/L
Uranium-238	UI	0.00	+/-113	99.5	pCi/L
Yttrium-88	U	2.74	+/-4.01	9.56	pCi/L
Zinc-65	U	4.76	+/-10.9	18.9	pCi/L
Zirconium-95	U	-2.15	+/-7.93	14.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.08	+/-2.16	4.01	5.00	pCi/L	KXB2	02/16/15	0930	1457183	2
Beta	U	2.53	+/-2.65	4.38	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	27.4	+/-125	217	300	pCi/L	MYM1	02/10/15	0931	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	365772015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:12		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.66	+/-18.6	31.3		pCi/L		MJH1	01/30/15	1003 1453371	1
Americium-241	U	-0.475	+/-5.43	8.65		pCi/L					
Antimony-124	U	-7.82	+/-11.4	19.3		pCi/L					
Antimony-125	U	7.36	+/-9.51	16.1		pCi/L					
Barium-133	U	-0.944	+/-4.53	6.83		pCi/L					
Barium-140	U	-24.3	+/-30.4	51.7		pCi/L					
Beryllium-7	U	-12.9	+/-36.6	59.0		pCi/L					
Bismuth-212	U	-24.9	+/-49.5	84.7		pCi/L					
Bismuth-214		16.7	+/-14.6	12.9		pCi/L					
Cerium-139	U	-2.21	+/-2.74	4.40		pCi/L					
Cerium-141	U	-1.67	+/-6.20	10.4		pCi/L					
Cerium-144	U	2.95	+/-17.3	28.7		pCi/L					
Cesium-134	U	2.49	+/-4.54	8.56		pCi/L					
Cesium-136	U	7.58	+/-14.5	28.1		pCi/L					
Cesium-137	U	-0.122	+/-3.56	6.47	10.0	pCi/L					
Chromium-51	U	-10.4	+/-39.1	67.8		pCi/L					
Cobalt-56	U	-1.22	+/-4.25	7.73		pCi/L					
Cobalt-57	U	-1.09	+/-2.07	3.46		pCi/L					
Cobalt-58	U	1.63	+/-4.11	7.76		pCi/L					
Cobalt-60	UI	0.00	+/-5.68	5.66		pCi/L					
Europium-152	U	-9.27	+/-10.2	16.0		pCi/L					
Europium-154	U	-5.49	+/-9.54	16.3		pCi/L					
Europium-155	U	-5.04	+/-8.88	14.0		pCi/L					
Iridium-192	U	2.49	+/-3.43	6.39		pCi/L					
Iron-59	U	2.94	+/-9.97	19.0		pCi/L					
Lead-210	U	-85.1	+/-66.7	114		pCi/L					
Lead-212	U	3.80	+/-7.36	10.7		pCi/L					
Lead-214	U	8.24	+/-11.1	14.9		pCi/L					
Manganese-54	U	-3.85	+/-3.75	6.27		pCi/L					
Mercury-203	U	2.28	+/-4.02	7.38		pCi/L					
Neodymium-147	U	-13.7	+/-66.1	119		pCi/L					
Neptunium-239	U	-5.84	+/-22.1	37.7		pCi/L					
Niobium-94	U	2.12	+/-3.36	6.45		pCi/L					
Niobium-95	U	0.928	+/-4.35	7.99		pCi/L					
Potassium-40	U	47.7	+/-49.9	63.4		pCi/L					
Promethium-144	U	3.22	+/-3.89	7.48		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	365772015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.96	+/-4.58	6.99	pCi/L
Radium-228	U	1.66	+/-18.6	31.3	pCi/L
Ruthenium-106	U	22.8	+/-30.5	59.9	pCi/L
Silver-110m	U	-1.63	+/-3.41	5.90	pCi/L
Sodium-22	U	-1.93	+/-3.38	5.78	pCi/L
Thallium-208	U	-2.01	+/-4.16	6.62	pCi/L
Thorium-230	U	28.2	+/-520	830	pCi/L
Thorium-234	U	30.9	+/-94.1	85.8	pCi/L
Tin-113	U	0.763	+/-4.58	8.15	pCi/L
Uranium-235	U	-13.2	+/-22.6	32.2	pCi/L
Uranium-238	U	30.9	+/-94.1	85.8	pCi/L
Yttrium-88	U	-2.15	+/-3.67	6.37	pCi/L
Zinc-65	U	-2.46	+/-10.3	15.7	pCi/L
Zirconium-95	U	-1.32	+/-7.54	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-0.189	+/-1.84	4.24	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta		11.6	+/-3.51	4.21	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-39.8	+/-118	209	300	pCi/L	MYM1	02/10/15	0948	1453895	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	365772016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	22.4	+/-23.6	29.0		pCi/L		MJH1	01/30/15	1003 1453371	1
Americium-241	U	-3.19	+/-11.1	17.2		pCi/L					
Antimony-124	U	-4.41	+/-7.56	12.9		pCi/L					
Antimony-125	U	-0.375	+/-8.36	14.7		pCi/L					
Barium-133	U	3.61	+/-5.67	7.04		pCi/L					
Barium-140	U	2.77	+/-15.7	29.4		pCi/L					
Beryllium-7	U	38.2	+/-56.3	45.7		pCi/L					
Bismuth-212	U	28.7	+/-47.5	81.1		pCi/L					
Bismuth-214		24.9	+/-14.3	10.1		pCi/L					
Cerium-139	U	-1.84	+/-2.91	4.75		pCi/L					
Cerium-141	U	6.67	+/-7.67	8.06		pCi/L					
Cerium-144	U	4.24	+/-18.0	31.2		pCi/L					
Cesium-134	U	-0.74	+/-3.50	6.23		pCi/L					
Cesium-136	U	-0.142	+/-7.89	12.2		pCi/L					
Cesium-137	U	-2.44	+/-3.29	5.63	10.0	pCi/L					
Chromium-51	U	-23.6	+/-29.9	50.5		pCi/L					
Cobalt-56	U	-0.857	+/-3.49	6.15		pCi/L					
Cobalt-57	U	2.24	+/-2.40	4.31		pCi/L					
Cobalt-58	U	-1.34	+/-3.33	5.80		pCi/L					
Cobalt-60	U	2.74	+/-3.24	6.70		pCi/L					
Europium-152	U	-0.87	+/-8.89	15.6		pCi/L					
Europium-154	U	-4.96	+/-9.50	16.7		pCi/L					
Europium-155	U	4.71	+/-9.48	16.8		pCi/L					
Iridium-192	U	1.64	+/-3.17	5.80		pCi/L					
Iron-59	U	-1.57	+/-6.22	11.4		pCi/L					
Lead-210	U	-97.8	+/-243	380		pCi/L					
Lead-212	U	2.65	+/-8.98	9.70		pCi/L					
Lead-214		29.0	+/-9.66	12.1		pCi/L					
Manganese-54	U	-2.42	+/-3.85	5.37		pCi/L					
Mercury-203	U	-0.0579	+/-4.12	6.05		pCi/L					
Neodymium-147	U	23.3	+/-33.7	62.6		pCi/L					
Neptunium-239	U	-12.7	+/-23.7	39.7		pCi/L					
Niobium-94	U	2.07	+/-3.54	5.89		pCi/L					
Niobium-95	U	-0.123	+/-3.11	5.65		pCi/L					
Potassium-40	U	24.0	+/-58.2	89.4		pCi/L					
Promethium-144	U	-1.78	+/-3.30	5.72		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 27 Project: WNUC00127  
Sample ID: 365772016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.594	+/-4.00	6.93	pCi/L
Radium-228	U	22.4	+/-23.6	29.0	pCi/L
Ruthenium-106	U	-3.29	+/-25.8	47.1	pCi/L
Silver-110m	U	1.21	+/-2.92	5.53	pCi/L
Sodium-22	U	-1.84	+/-3.33	5.84	pCi/L
Thallium-208	U	0.211	+/-5.20	6.00	pCi/L
Thorium-230	U	942	+/-1020	1380	pCi/L
Thorium-234	U	27.6	+/-141	200	pCi/L
Tin-113	U	0.0739	+/-4.23	7.43	pCi/L
Uranium-235	U	24.2	+/-27.9	33.2	pCi/L
Uranium-238	U	27.6	+/-141	200	pCi/L
Yttrium-88	U	-3.6	+/-4.58	6.79	pCi/L
Zinc-65	U	2.04	+/-7.74	13.0	pCi/L
Zirconium-95	U	5.50	+/-5.91	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.42	+/-3.39	4.74	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta		10.8	+/-3.61	4.58	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	63.0	+/-118	202	300	pCi/L	MYM1	02/15/15	0938	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.91	+/-18.3	25.7		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	-8.67	+/-21.2	32.0		pCi/L					
Antimony-124	U	-4.26	+/-7.57	13.5		pCi/L					
Antimony-125	U	3.05	+/-9.99	15.7		pCi/L					
Barium-133	U	-0.364	+/-4.67	7.08		pCi/L					
Barium-140	U	-5.5	+/-19.5	34.9		pCi/L					
Beryllium-7	U	-10.2	+/-31.7	49.8		pCi/L					
Bismuth-212	U	40.1	+/-40.3	81.0		pCi/L					
Bismuth-214	U	12.2	+/-13.3	12.3		pCi/L					
Cerium-139	U	-0.0491	+/-3.26	5.14		pCi/L					
Cerium-141	U	1.79	+/-7.57	8.98		pCi/L					
Cerium-144	U	-21.1	+/-18.2	31.0		pCi/L					
Cesium-134	U	-0.298	+/-4.05	6.26		pCi/L					
Cesium-136	U	1.33	+/-7.10	13.6		pCi/L					
Cesium-137	U	-2.66	+/-4.68	7.04	10.0	pCi/L					
Chromium-51	U	16.2	+/-32.0	58.3		pCi/L					
Cobalt-56	U	-1.59	+/-3.68	6.31		pCi/L					
Cobalt-57	U	1.07	+/-2.62	4.53		pCi/L					
Cobalt-58	U	5.01	+/-3.06	6.22		pCi/L					
Cobalt-60	U	-0.517	+/-3.61	6.61		pCi/L					
Europium-152	U	-3.99	+/-9.97	16.9		pCi/L					
Europium-154	U	4.83	+/-9.55	17.4		pCi/L					
Europium-155	U	-1.36	+/-11.2	18.9		pCi/L					
Iridium-192	U	-1.57	+/-3.32	5.63		pCi/L					
Iron-59	U	0.625	+/-7.17	13.5		pCi/L					
Lead-210	U	-146	+/-767	1160		pCi/L					
Lead-212	U	5.43	+/-8.13	10.4		pCi/L					
Lead-214	U	5.60	+/-15.8	15.9		pCi/L					
Manganese-54	U	1.15	+/-2.90	5.50		pCi/L					
Mercury-203	U	2.84	+/-4.05	6.62		pCi/L					
Neodymium-147	U	20.0	+/-39.2	74.8		pCi/L					
Neptunium-239	U	9.82	+/-27.3	47.3		pCi/L					
Niobium-94	U	0.817	+/-3.33	6.10		pCi/L					
Niobium-95	U	0.967	+/-3.44	6.38		pCi/L					
Potassium-40		87.8	+/-67.3	58.5		pCi/L					
Promethium-144	U	-0.208	+/-3.23	5.78		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.98	+/-4.00	6.94	pCi/L
Radium-228	U	-3.91	+/-18.3	25.7	pCi/L
Ruthenium-106	U	10.3	+/-29.3	54.9	pCi/L
Silver-110m	U	-7.95	+/-4.24	4.99	pCi/L
Sodium-22	U	1.69	+/-3.36	6.10	pCi/L
Thallium-208	U	-3.21	+/-4.02	6.41	pCi/L
Thorium-230	U	798	+/-1390	2240	pCi/L
Thorium-234	U	77.8	+/-268	326	pCi/L
Tin-113	U	0.0373	+/-4.27	7.46	pCi/L
Uranium-235	U	6.23	+/-26.4	36.5	pCi/L
Uranium-238	U	77.8	+/-268	326	pCi/L
Yttrium-88	U	-1.54	+/-2.93	5.28	pCi/L
Zinc-65	U	-8.98	+/-7.42	11.9	pCi/L
Zirconium-95	U	-2.44	+/-6.25	10.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	17.5	+/-6.07	8.81	5.00	pCi/L	AXJ1	02/15/15	1646	1457184	2
Beta	44.1	+/-4.15	5.25	5.00	pCi/L					
Alpha	9.20	+/-4.12	6.11	5.00	pCi/L	AXJ1	02/16/15	1817	1457184	3
Beta	42.7	+/-4.65	6.46	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-8.87	+/-113	199	300	pCi/L	MYM1	02/15/15	0954	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.1	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	365772017	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	365772018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.16	+/-19.9	26.5		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	-9.4	+/-16.6	28.3		pCi/L					
Antimony-124	U	5.59	+/-5.05	14.8		pCi/L					
Antimony-125	U	1.16	+/-8.43	15.3		pCi/L					
Barium-133	U	3.70	+/-4.46	7.55		pCi/L					
Barium-140	U	-5.67	+/-19.2	33.4		pCi/L					
Beryllium-7	U	-11.4	+/-28.3	49.0		pCi/L					
Bismuth-212	U	16.7	+/-50.2	90.5		pCi/L					
Bismuth-214	U	12.0	+/-9.55	16.2		pCi/L					
Cerium-139	U	-1.58	+/-3.12	5.17		pCi/L					
Cerium-141	U	7.75	+/-10.7	9.88		pCi/L					
Cerium-144	U	-6.32	+/-19.8	33.4		pCi/L					
Cesium-134	U	-0.946	+/-2.97	5.42		pCi/L					
Cesium-136	U	6.41	+/-7.39	13.7		pCi/L					
Cesium-137	U	0.910	+/-3.15	5.77	10.0	pCi/L					
Chromium-51	U	-14.4	+/-32.0	56.1		pCi/L					
Cobalt-56	U	1.35	+/-3.47	6.64		pCi/L					
Cobalt-57	U	-1.81	+/-2.60	4.32		pCi/L					
Cobalt-58	U	-1.22	+/-3.02	5.44		pCi/L					
Cobalt-60	U	-0.545	+/-4.38	7.26		pCi/L					
Europium-152	U	2.22	+/-9.63	17.5		pCi/L					
Europium-154	U	-0.0812	+/-9.47	17.6		pCi/L					
Europium-155	U	0.642	+/-11.1	19.2		pCi/L					
Iridium-192	U	-0.449	+/-3.15	5.62		pCi/L					
Iron-59	U	2.10	+/-8.52	13.9		pCi/L					
Lead-210	U	8.38	+/-696	683		pCi/L					
Lead-212	U	-4.89	+/-7.23	11.5		pCi/L					
Lead-214	U	12.5	+/-13.2	16.4		pCi/L					
Manganese-54	U	-1.51	+/-3.26	5.79		pCi/L					
Mercury-203	UI	0.00	+/-5.40	6.30		pCi/L					
Neodymium-147	U	22.4	+/-57.8	71.2		pCi/L					
Neptunium-239	U	-10.2	+/-29.0	49.1		pCi/L					
Niobium-94	U	0.665	+/-3.05	5.49		pCi/L					
Niobium-95	U	-4.34	+/-3.96	5.81		pCi/L					
Potassium-40	U	25.1	+/-60.7	51.9		pCi/L					
Promethium-144	U	-1.44	+/-3.30	5.58		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 29

Sample ID: 365772018

Project: WNUC00127

Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.14	+/-3.97	7.50	pCi/L
Radium-228	U	8.16	+/-19.9	26.5	pCi/L
Ruthenium-106	U	-14.1	+/-30.1	51.1	pCi/L
Silver-110m	U	-1.03	+/-3.16	5.42	pCi/L
Sodium-22	U	0.219	+/-3.30	6.20	pCi/L
Thallium-208	U	1.39	+/-4.24	7.01	pCi/L
Thorium-230	U	898	+/-1070	1950	pCi/L
Thorium-234	U	-136	+/-191	271	pCi/L
Tin-113	U	2.41	+/-4.26	7.89	pCi/L
Uranium-235	U	27.0	+/-37.2	36.4	pCi/L
Uranium-238	U	-136	+/-191	271	pCi/L
Yttrium-88	U	-0.497	+/-3.31	6.39	pCi/L
Zinc-65	U	1.13	+/-7.03	11.7	pCi/L
Zirconium-95	U	4.84	+/-6.11	11.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	4.92	+/-1.93	2.83	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta	11.0	+/-1.84	2.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-7.06	+/-115	203	300	pCi/L	MYM1	02/15/15	1011	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	365772019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:53		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.18	+/-15.2	24.6		pCi/L		MJH1	01/30/15	1004 1453371	1
Americium-241	U	12.4	+/-12.3	20.3		pCi/L					
Antimony-124	U	0.292	+/-7.49	14.8		pCi/L					
Antimony-125	U	0.987	+/-8.67	13.9		pCi/L					
Barium-133	U	4.90	+/-6.60	7.34		pCi/L					
Barium-140	U	-7.08	+/-18.9	32.5		pCi/L					
Beryllium-7	U	-1.23	+/-27.6	49.1		pCi/L					
Bismuth-212	U	15.9	+/-42.8	82.3		pCi/L					
Bismuth-214		12.0	+/-10.6	10.2		pCi/L					
Cerium-139	U	-0.812	+/-2.74	4.60		pCi/L					
Cerium-141	U	2.46	+/-5.35	9.39		pCi/L					
Cerium-144	U	-8.08	+/-18.5	30.9		pCi/L					
Cesium-134	U	-1.1	+/-3.25	5.85		pCi/L					
Cesium-136	U	1.41	+/-8.36	14.2		pCi/L					
Cesium-137	U	2.72	+/-5.56	6.17	10.0	pCi/L					
Chromium-51	U	-12.1	+/-30.1	52.7		pCi/L					
Cobalt-56	U	-2.24	+/-3.44	5.95		pCi/L					
Cobalt-57	U	-0.728	+/-2.35	3.98		pCi/L					
Cobalt-58	U	1.58	+/-2.80	5.60		pCi/L					
Cobalt-60	U	-0.771	+/-3.36	6.00		pCi/L					
Europium-152	U	3.62	+/-8.91	14.8		pCi/L					
Europium-154	U	8.34	+/-8.74	18.5		pCi/L					
Europium-155	U	-9.54	+/-9.15	14.9		pCi/L					
Iridium-192	U	-0.321	+/-3.00	5.38		pCi/L					
Iron-59	U	-5.17	+/-5.88	9.59		pCi/L					
Lead-210	U	-12.3	+/-323	495		pCi/L					
Lead-212	U	1.67	+/-8.65	10.9		pCi/L					
Lead-214	U	9.33	+/-9.56	14.9		pCi/L					
Manganese-54	U	2.91	+/-3.75	5.72		pCi/L					
Mercury-203	U	1.05	+/-3.15	5.80		pCi/L					
Neodymium-147	U	-8.74	+/-36.9	64.5		pCi/L					
Neptunium-239	U	3.80	+/-24.4	42.6		pCi/L					
Niobium-94	U	-1.89	+/-2.91	5.10		pCi/L					
Niobium-95	U	-0.946	+/-3.34	6.03		pCi/L					
Potassium-40	U	-47.5	+/-45.0	77.4		pCi/L					
Promethium-144	U	1.13	+/-3.12	5.95		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 30  
Sample ID: 365772019

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.328	+/-3.75	6.67	pCi/L
Radium-228	U	-4.18	+/-15.2	24.6	pCi/L
Ruthenium-106	U	-12.3	+/-27.8	47.0	pCi/L
Silver-110m	U	0.0346	+/-3.30	5.12	pCi/L
Sodium-22	U	2.84	+/-3.06	6.48	pCi/L
Thallium-208	U	-2.2	+/-4.48	6.10	pCi/L
Thorium-230	U	-544	+/-1060	1520	pCi/L
Thorium-234	U	62.8	+/-166	188	pCi/L
Tin-113	U	-1.38	+/-3.86	6.74	pCi/L
Uranium-235	U	4.20	+/-22.8	33.4	pCi/L
Uranium-238	U	62.8	+/-166	188	pCi/L
Yttrium-88	U	1.17	+/-3.30	6.93	pCi/L
Zinc-65	U	-1.8	+/-6.67	11.9	pCi/L
Zirconium-95	U	-0.285	+/-5.38	10.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	20.4	+/-2.99	3.03	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta	33.4	+/-2.25	2.49	5.00	pCi/L					
Alpha	24.3	+/-3.03	2.58	5.00	pCi/L	AXJ1	02/16/15	1816	1457184	3
Beta	34.4	+/-2.05	1.85	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	54.4	+/-118	203	300	pCi/L	MYM1	02/15/15	1028	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.7	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	365772019	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	365772020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		27.5	+/-17.8	23.7		pCi/L		MJH1	01/30/15	1005 1453371	1
Americium-241	U	1.17	+/-35.2	55.2		pCi/L					
Antimony-124	U	5.51	+/-8.36	18.2		pCi/L					
Antimony-125	U	5.87	+/-9.33	17.5		pCi/L					
Barium-133	U	-2.66	+/-4.91	7.26		pCi/L					
Barium-140	U	14.9	+/-20.7	39.4		pCi/L					
Beryllium-7	U	3.76	+/-29.1	52.6		pCi/L					
Bismuth-212	U	52.4	+/-47.8	97.6		pCi/L					
Bismuth-214		28.2	+/-14.4	11.1		pCi/L					
Cerium-139	U	-0.864	+/-3.29	5.47		pCi/L					
Cerium-141	U	-0.675	+/-7.86	11.6		pCi/L					
Cerium-144	U	18.1	+/-22.2	39.6		pCi/L					
Cesium-134	U	0.156	+/-3.47	6.55		pCi/L					
Cesium-136	U	-3.65	+/-7.35	12.8		pCi/L					
Cesium-137	U	-0.50	+/-3.34	6.17	10.0	pCi/L					
Chromium-51	U	3.54	+/-34.8	62.7		pCi/L					
Cobalt-56	U	-1.0	+/-6.39	6.75		pCi/L					
Cobalt-57	U	2.79	+/-2.96	5.31		pCi/L					
Cobalt-58	U	-3.26	+/-4.41	6.31		pCi/L					
Cobalt-60	U	3.32	+/-3.61	7.66		pCi/L					
Europium-152	U	-2.77	+/-10.4	18.3		pCi/L					
Europium-154	U	-10.1	+/-10.1	15.7		pCi/L					
Europium-155	U	4.07	+/-11.7	20.5		pCi/L					
Iridium-192	U	-0.124	+/-3.49	6.23		pCi/L					
Iron-59	U	-1.07	+/-7.37	13.5		pCi/L					
Lead-210	U	-1200	+/-1620	2430		pCi/L					
Lead-212	U	-2.42	+/-8.06	12.1		pCi/L					
Lead-214		18.6	+/-13.5	13.8		pCi/L					
Manganese-54	U	2.93	+/-3.77	5.86		pCi/L					
Mercury-203	U	0.0236	+/-3.61	6.48		pCi/L					
Neodymium-147	U	29.5	+/-38.4	74.4		pCi/L					
Neptunium-239	U	4.83	+/-32.0	55.0		pCi/L					
Niobium-94	U	0.975	+/-3.14	6.00		pCi/L					
Niobium-95	U	1.16	+/-3.41	6.58		pCi/L					
Potassium-40	U	9.64	+/-69.2	71.7		pCi/L					
Promethium-144	U	-0.784	+/-3.23	5.88		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	365772020	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.81	+/-4.45	7.79	pCi/L
Radium-228		27.5	+/-17.8	23.7	pCi/L
Ruthenium-106	U	-32.3	+/-37.9	55.0	pCi/L
Silver-110m	U	-0.132	+/-2.98	5.58	pCi/L
Sodium-22	U	-2.86	+/-3.45	5.57	pCi/L
Thallium-208	U	2.67	+/-5.65	7.97	pCi/L
Thorium-230	U	-2070	+/-2010	3110	pCi/L
Thorium-234	U	19.3	+/-296	430	pCi/L
Tin-113	U	1.27	+/-4.55	8.28	pCi/L
Uranium-235	U	-21.5	+/-31.1	40.3	pCi/L
Uranium-238	U	19.3	+/-296	430	pCi/L
Yttrium-88	U	-0.28	+/-3.41	6.75	pCi/L
Zinc-65	U	-2.92	+/-7.80	11.6	pCi/L
Zirconium-95	U	-3.17	+/-5.60	9.88	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.98	+/-1.63	2.62	5.00	pCi/L	AXJ1	02/15/15	1652	1457184	2
Beta		229	+/-4.73	2.56	5.00	pCi/L					
Alpha		6.63	+/-2.19	2.70	5.00	pCi/L	AXJ1	02/16/15	1816	1457184	3
Beta		251	+/-4.76	1.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	351	+/-128	198	300	pCi/L	MYM1	02/15/15	1044	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 32  
Sample ID: 365772020

Project: WNUC00127  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	365772021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:26		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.9	+/-19.1	30.8		pCi/L		MJH1	01/29/15	1352 1453373	1
Americium-241	U	-10.3	+/-26.5	35.0		pCi/L					
Antimony-124	U	1.90	+/-9.91	19.3		pCi/L					
Antimony-125	U	3.69	+/-10.9	19.6		pCi/L					
Barium-133	U	-2.75	+/-5.90	8.53		pCi/L					
Barium-140	U	-20	+/-22.0	37.1		pCi/L					
Beryllium-7	U	17.9	+/-36.6	66.0		pCi/L					
Bismuth-212	U	-4.84	+/-56.6	101		pCi/L					
Bismuth-214		17.6	+/-14.0	13.2		pCi/L					
Cerium-139	U	1.16	+/-3.54	6.19		pCi/L					
Cerium-141	U	0.588	+/-12.0	12.0		pCi/L					
Cerium-144	U	-1.05	+/-41.6	41.4		pCi/L					
Cesium-134	U	-3.94	+/-3.96	6.38		pCi/L					
Cesium-136	U	4.51	+/-6.70	14.5		pCi/L					
Cesium-137	U	-2.13	+/-3.95	6.80	10.0	pCi/L					
Chromium-51	U	-20.7	+/-38.0	65.1		pCi/L					
Cobalt-56	U	-0.119	+/-6.37	8.41		pCi/L					
Cobalt-57	U	-3.96	+/-3.78	5.32		pCi/L					
Cobalt-58	U	-1.48	+/-4.25	7.35		pCi/L					
Cobalt-60	U	-0.101	+/-4.05	7.45		pCi/L					
Europium-152	U	-7.87	+/-12.0	19.7		pCi/L					
Europium-154	U	7.22	+/-12.6	23.9		pCi/L					
Europium-155	U	5.92	+/-12.4	22.2		pCi/L					
Iridium-192	U	1.64	+/-3.98	7.18		pCi/L					
Iron-59	U	2.23	+/-8.17	15.5		pCi/L					
Lead-210	U	49.0	+/-646	1020		pCi/L					
Lead-212	U	2.21	+/-8.80	13.1		pCi/L					
Lead-214	UI	0.00	+/-13.0	19.3		pCi/L					
Manganese-54	U	2.39	+/-4.97	7.97		pCi/L					
Mercury-203	U	0.787	+/-4.22	7.54		pCi/L					
Neodymium-147	U	11.1	+/-43.1	79.6		pCi/L					
Neptunium-239	U	28.7	+/-34.0	61.4		pCi/L					
Niobium-94	U	0.672	+/-3.59	6.55		pCi/L					
Niobium-95	U	-1.9	+/-4.03	6.92		pCi/L					
Potassium-40	U	8.28	+/-62.3	82.7		pCi/L					
Promethium-144	U	-0.958	+/-4.79	7.20		pCi/L					



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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 33 Project: WNUC00127  
Sample ID: 365772021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	4.55	+/-5.05	9.39	pCi/L
Radium-228	U	17.9	+/-19.1	30.8	pCi/L
Ruthenium-106	U	27.7	+/-36.1	68.8	pCi/L
Silver-110m	U	0.172	+/-3.61	6.55	pCi/L
Sodium-22	U	2.21	+/-4.49	8.42	pCi/L
Thallium-208	U	-0.838	+/-5.56	7.88	pCi/L
Thorium-230	U	-1210	+/-1660	2450	pCi/L
Thorium-234	U	14.0	+/-269	302	pCi/L
Tin-113	U	0.754	+/-6.73	9.48	pCi/L
Uranium-235	U	-13	+/-45.3	43.2	pCi/L
Uranium-238	U	14.0	+/-269	302	pCi/L
Yttrium-88	U	-3.21	+/-4.79	8.09	pCi/L
Zinc-65	U	-10.3	+/-9.59	15.6	pCi/L
Zirconium-95	U	-1.03	+/-7.75	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.86	+/-2.45	4.15	5.00	pCi/L	AXJ1	02/16/15	0850	1457184	2
Beta	U	2.83	+/-2.54	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	95.3	+/-115	194	300	pCi/L	MYM1	02/15/15	1101	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365772022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.39	+/-16.3	24.3		pCi/L		MJH1	01/30/15	1431 1453373	1
Americium-241	U	-6.47	+/-14.4	22.0		pCi/L					
Antimony-124	U	3.51	+/-6.66	14.5		pCi/L					
Antimony-125	U	-0.633	+/-7.40	13.2		pCi/L					
Barium-133	U	2.69	+/-3.93	6.67		pCi/L					
Barium-140	U	2.71	+/-18.9	34.2		pCi/L					
Beryllium-7	U	-0.196	+/-26.5	47.5		pCi/L					
Bismuth-212	U	29.0	+/-36.9	75.2		pCi/L					
Bismuth-214		10.8	+/-9.48	10.6		pCi/L					
Cerium-139	U	-1.11	+/-2.63	4.37		pCi/L					
Cerium-141	U	-3.7	+/-5.32	8.75		pCi/L					
Cerium-144	U	-6.72	+/-16.6	28.0		pCi/L					
Cesium-134	U	0.987	+/-3.49	6.65		pCi/L					
Cesium-136	U	-1.82	+/-8.54	13.8		pCi/L					
Cesium-137	U	2.50	+/-4.83	4.98	10.0	pCi/L					
Chromium-51	U	-8.7	+/-30.8	54.4		pCi/L					
Cobalt-56	U	-1.47	+/-3.47	5.24		pCi/L					
Cobalt-57	U	0.436	+/-2.32	4.05		pCi/L					
Cobalt-58	U	-0.539	+/-2.94	5.42		pCi/L					
Cobalt-60	U	-0.617	+/-3.20	5.78		pCi/L					
Europium-152	U	-0.93	+/-8.77	15.6		pCi/L					
Europium-154	U	3.12	+/-9.65	18.6		pCi/L					
Europium-155	U	1.77	+/-8.97	15.8		pCi/L					
Iridium-192	U	0.0594	+/-3.21	5.38		pCi/L					
Iron-59	U	2.82	+/-6.63	12.9		pCi/L					
Lead-210	U	134	+/-310	485		pCi/L					
Lead-212	U	2.37	+/-7.83	9.19		pCi/L					
Lead-214	U	5.82	+/-11.0	12.0		pCi/L					
Manganese-54	U	0.367	+/-3.86	5.97		pCi/L					
Mercury-203	U	0.617	+/-3.19	5.82		pCi/L					
Neodymium-147	U	-53.8	+/-40.4	62.6		pCi/L					
Neptunium-239	U	-0.848	+/-23.1	40.0		pCi/L					
Niobium-94	U	-1.34	+/-3.01	4.60		pCi/L					
Niobium-95	U	1.37	+/-3.27	6.31		pCi/L					
Potassium-40	U	-39.5	+/-48.0	84.4		pCi/L					
Promethium-144	U	-0.219	+/-3.34	5.36		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365772022	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.58	+/-3.73	7.05	pCi/L
Radium-228	U	-5.39	+/-16.3	24.3	pCi/L
Ruthenium-106	U	23.4	+/-25.9	50.5	pCi/L
Silver-110m	U	2.13	+/-4.28	5.41	pCi/L
Sodium-22	U	1.20	+/-3.42	6.61	pCi/L
Thallium-208	U	-3.5	+/-4.51	5.97	pCi/L
Thorium-230	U	933	+/-1170	1570	pCi/L
Thorium-234	U	51.4	+/-104	222	pCi/L
Tin-113	U	-0.255	+/-3.77	6.74	pCi/L
Uranium-235	U	-1.13	+/-21.2	33.3	pCi/L
Uranium-238	U	51.4	+/-104	222	pCi/L
Yttrium-88	U	-0.373	+/-2.96	5.80	pCi/L
Zinc-65	U	-4.29	+/-6.60	11.2	pCi/L
Zirconium-95	U	7.45	+/-8.75	11.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.504	+/-1.70	3.52	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta	U	4.52	+/-3.01	4.70	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	89.8	+/-116	195	300	pCi/L	MYM1	02/15/15	1117	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365772023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:44		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-21.3	32.0		pCi/L		MJH1	01/30/15	1431 1453373	1
Americium-241	U	13.0	+/-33.7	54.4		pCi/L					
Antimony-124	U	-5.82	+/-6.92	11.5		pCi/L					
Antimony-125	U	3.66	+/-9.58	17.6		pCi/L					
Barium-133	U	-1.48	+/-5.08	7.72		pCi/L					
Barium-140	U	5.36	+/-25.9	40.8		pCi/L					
Beryllium-7	UI	0.00	+/-63.5	53.4		pCi/L					
Bismuth-212	U	-6.04	+/-39.6	73.7		pCi/L					
Bismuth-214		16.3	+/-13.0	13.3		pCi/L					
Cerium-139	U	0.513	+/-3.24	5.53		pCi/L					
Cerium-141	U	-1.67	+/-7.70	11.2		pCi/L					
Cerium-144	U	-6.75	+/-23.3	38.9		pCi/L					
Cesium-134	U	1.92	+/-3.53	6.99		pCi/L					
Cesium-136	U	1.29	+/-6.70	12.9		pCi/L					
Cesium-137	U	1.57	+/-4.11	6.99	10.0	pCi/L					
Chromium-51	U	-21.8	+/-35.5	60.9		pCi/L					
Cobalt-56	U	-1.18	+/-6.34	6.64		pCi/L					
Cobalt-57	U	0.906	+/-2.91	5.05		pCi/L					
Cobalt-58	U	-0.448	+/-3.46	6.37		pCi/L					
Cobalt-60	U	0.384	+/-3.35	6.45		pCi/L					
Europium-152	U	-3.57	+/-10.5	18.3		pCi/L					
Europium-154	U	6.99	+/-9.79	20.3		pCi/L					
Europium-155	U	-4.71	+/-12.9	21.7		pCi/L					
Iridium-192	U	0.252	+/-3.53	6.35		pCi/L					
Iron-59	U	-1.31	+/-7.10	12.9		pCi/L					
Lead-210	U	65.5	+/-1530	2390		pCi/L					
Lead-212	U	3.19	+/-8.45	12.2		pCi/L					
Lead-214	UI	0.00	+/-15.0	12.9		pCi/L					
Manganese-54	U	0.161	+/-3.71	6.05		pCi/L					
Mercury-203	U	0.351	+/-3.76	6.78		pCi/L					
Neodymium-147	U	-46	+/-41.7	65.8		pCi/L					
Neptunium-239	U	28.5	+/-30.1	54.3		pCi/L					
Niobium-94	U	-0.864	+/-3.07	5.57		pCi/L					
Niobium-95	U	-0.0935	+/-3.80	7.02		pCi/L					
Potassium-40	U	-31.6	+/-52.2	90.0		pCi/L					
Promethium-144	U	-1.1	+/-3.36	6.05		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365772023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.44	+/-5.35	8.21	pCi/L
Radium-228	UI	0.00	+/-21.3	32.0	pCi/L
Ruthenium-106	U	4.65	+/-32.4	57.9	pCi/L
Silver-110m	U	-0.375	+/-3.42	5.52	pCi/L
Sodium-22	U	2.97	+/-3.31	7.09	pCi/L
Thallium-208	U	4.91	+/-7.61	5.61	pCi/L
Thorium-230	U	-1090	+/-2030	2900	pCi/L
Thorium-234	U	210	+/-350	381	pCi/L
Tin-113	U	-0.683	+/-4.22	7.45	pCi/L
Uranium-235	U	-17	+/-29.7	38.5	pCi/L
Uranium-238	U	210	+/-350	381	pCi/L
Yttrium-88	U	-2.33	+/-3.85	5.33	pCi/L
Zinc-65	U	3.72	+/-7.96	14.5	pCi/L
Zirconium-95	U	4.82	+/-6.29	12.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	3.67	+/-2.13	3.30	5.00	pCi/L	AXJ1	02/15/15	1646	1457184	2
Beta	28.1	+/-2.24	2.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	45.5	+/-117	201	300	pCi/L	MYM1	02/15/15	1134	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 41R	Project:	WNUC00127
Sample ID:	365772024	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:52		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	17.6	+/-25.7	23.9		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	21.9	+/-30.6	53.4		pCi/L					
Antimony-124	U	3.55	+/-10.7	22.5		pCi/L					
Antimony-125	U	-3.57	+/-11.4	19.6		pCi/L					
Barium-133	U	2.25	+/-5.26	8.67		pCi/L					
Barium-140	U	-12.1	+/-33.4	60.2		pCi/L					
Beryllium-7	U	0.405	+/-38.2	59.7		pCi/L					
Bismuth-212	U	6.03	+/-56.1	104		pCi/L					
Bismuth-214	U	5.99	+/-9.51	14.8		pCi/L					
Cerium-139	U	-1.34	+/-3.19	5.37		pCi/L					
Cerium-141	U	-3.64	+/-8.06	12.0		pCi/L					
Cerium-144	U	0.747	+/-21.1	37.0		pCi/L					
Cesium-134	U	-3.96	+/-5.61	7.76		pCi/L					
Cesium-136	U	-0.153	+/-14.2	26.6		pCi/L					
Cesium-137	U	-1.05	+/-3.86	6.93	10.0	pCi/L					
Chromium-51	U	13.4	+/-50.0	81.5		pCi/L					
Cobalt-56	U	-2.53	+/-4.44	7.51		pCi/L					
Cobalt-57	U	-0.275	+/-2.84	4.97		pCi/L					
Cobalt-58	U	6.99	+/-13.0	7.27		pCi/L					
Cobalt-60	U	-5.98	+/-8.21	7.62		pCi/L					
Europium-152	U	-3.73	+/-10.9	19.1		pCi/L					
Europium-154	U	7.29	+/-11.3	23.7		pCi/L					
Europium-155	U	5.69	+/-11.6	21.2		pCi/L					
Iridium-192	U	1.95	+/-4.82	7.37		pCi/L					
Iron-59	U	-9.84	+/-10.1	16.5		pCi/L					
Lead-210	U	1290	+/-1600	2260		pCi/L					
Lead-212	U	8.70	+/-13.3	11.5		pCi/L					
Lead-214	U	7.19	+/-13.8	15.3		pCi/L					
Manganese-54	U	-2.99	+/-4.12	6.81		pCi/L					
Mercury-203	U	-0.118	+/-4.28	7.74		pCi/L					
Neodymium-147	U	11.6	+/-73.0	138		pCi/L					
Neptunium-239	U	15.2	+/-29.8	54.2		pCi/L					
Niobium-94	U	-0.109	+/-3.65	6.66		pCi/L					
Niobium-95	U	-1.57	+/-4.49	6.86		pCi/L					
Potassium-40	U	25.2	+/-66.5	83.2		pCi/L					
Promethium-144	U	0.596	+/-3.78	7.05		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 365772024

Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-2.15	+/-6.39	9.40	pCi/L
Radium-228	U	17.6	+/-25.7	23.9	pCi/L
Ruthenium-106	U	16.3	+/-36.2	69.6	pCi/L
Silver-110m	U	-0.321	+/-3.50	6.43	pCi/L
Sodium-22	U	2.60	+/-3.98	8.37	pCi/L
Thallium-208	U	0.132	+/-5.77	8.63	pCi/L
Thorium-230	U	-1680	+/-1940	2770	pCi/L
Thorium-234	U	371	+/-478	437	pCi/L
Tin-113	U	2.69	+/-5.08	9.50	pCi/L
Uranium-235	U	4.52	+/-22.3	36.2	pCi/L
Uranium-238	U	371	+/-478	437	pCi/L
Yttrium-88	U	1.92	+/-4.89	10.4	pCi/L
Zinc-65	U	0.734	+/-7.49	14.6	pCi/L
Zirconium-95	U	3.11	+/-7.69	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	4.02	+/-3.30	4.65	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta		22.0	+/-4.45	4.31	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	33.9	+/-115	199	300	pCi/L	MYM1	02/15/15	1150	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365772025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:07		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.83	+/-18.7	31.5		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	-29.9	+/-25.9	43.5		pCi/L					
Antimony-124	U	1.76	+/-10.3	17.9		pCi/L					
Antimony-125	U	-0.665	+/-10.2	18.1		pCi/L					
Barium-133	U	0.824	+/-5.35	8.52		pCi/L					
Barium-140	U	1.81	+/-22.5	40.1		pCi/L					
Beryllium-7	U	12.3	+/-29.5	55.1		pCi/L					
Bismuth-212	U	30.7	+/-50.8	99.7		pCi/L					
Bismuth-214		27.3	+/-17.2	14.4		pCi/L					
Cerium-139	U	0.526	+/-3.35	5.78		pCi/L					
Cerium-141	U	0.268	+/-7.38	11.4		pCi/L					
Cerium-144	U	-11	+/-22.6	38.0		pCi/L					
Cesium-134	U	-0.681	+/-4.21	7.61		pCi/L					
Cesium-136	U	8.86	+/-9.01	18.7		pCi/L					
Cesium-137	U	2.80	+/-3.98	7.83	10.0	pCi/L					
Chromium-51	U	11.8	+/-35.2	64.9		pCi/L					
Cobalt-56	U	-2.03	+/-3.96	6.83		pCi/L					
Cobalt-57	U	-1.69	+/-3.07	5.17		pCi/L					
Cobalt-58	U	0.0119	+/-3.88	7.15		pCi/L					
Cobalt-60	U	0.743	+/-4.43	6.98		pCi/L					
Europium-152	U	4.55	+/-10.6	19.7		pCi/L					
Europium-154	U	11.3	+/-16.1	24.9		pCi/L					
Europium-155	U	-2.24	+/-12.4	21.5		pCi/L					
Iridium-192	U	-3.32	+/-3.73	6.27		pCi/L					
Iron-59	U	-2.3	+/-8.41	15.5		pCi/L					
Lead-210	U	506	+/-1400	2380		pCi/L					
Lead-212	U	5.36	+/-8.79	11.0		pCi/L					
Lead-214		33.3	+/-16.0	21.1		pCi/L					
Manganese-54	U	0.912	+/-3.96	7.41		pCi/L					
Mercury-203	U	-1.86	+/-3.78	6.60		pCi/L					
Neodymium-147	U	-5.22	+/-45.0	78.8		pCi/L					
Neptunium-239	U	-39.3	+/-35.4	53.9		pCi/L					
Niobium-94	U	-0.334	+/-4.04	7.31		pCi/L					
Niobium-95	U	-0.0117	+/-3.96	7.28		pCi/L					
Potassium-40	U	11.7	+/-53.6	102		pCi/L					
Promethium-144	U	0.366	+/-3.86	7.14		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365772025	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.72	+/-4.72	8.11	pCi/L
Radium-228	U	-4.83	+/-18.7	31.5	pCi/L
Ruthenium-106	U	28.0	+/-34.3	67.9	pCi/L
Silver-110m	U	-2.08	+/-3.54	6.18	pCi/L
Sodium-22	U	3.99	+/-5.68	8.91	pCi/L
Thallium-208	U	0.545	+/-5.12	8.61	pCi/L
Thorium-230	U	-430	+/-1630	2870	pCi/L
Thorium-234	U	14.7	+/-267	417	pCi/L
Tin-113	U	1.99	+/-4.65	8.60	pCi/L
Uranium-235	U	15.9	+/-26.5	38.3	pCi/L
Uranium-238	U	14.7	+/-267	417	pCi/L
Yttrium-88	U	-1.35	+/-4.48	8.42	pCi/L
Zinc-65	U	-3.63	+/-9.19	14.0	pCi/L
Zirconium-95	U	-0.0475	+/-6.76	12.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	-1.18	+/-1.47	4.23	5.00	pCi/L	AXJ1	02/16/15	0849	1457184	2
Beta		4.36	+/-2.73	4.12	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	71.9	+/-115	195	300	pCi/L	MYM1	02/15/15	1207	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	365772026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:54		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	18.2	+/-13.6	29.2		pCi/L		MJH1	01/30/15	1432 1453373	1
Americium-241	U	-11.4	+/-30.5	47.8		pCi/L					
Antimony-124	U	-5.92	+/-9.52	16.5		pCi/L					
Antimony-125	U	-5.59	+/-11.5	16.8		pCi/L					
Barium-133	U	4.07	+/-5.44	6.98		pCi/L					
Barium-140	U	-8.29	+/-18.8	32.0		pCi/L					
Beryllium-7	U	18.1	+/-30.8	58.2		pCi/L					
Bismuth-212	U	-38.4	+/-63.2	93.6		pCi/L					
Bismuth-214	U	7.89	+/-14.4	13.1		pCi/L					
Cerium-139	U	-1.43	+/-3.25	5.37		pCi/L					
Cerium-141	U	-4.62	+/-6.35	10.4		pCi/L					
Cerium-144	U	8.47	+/-22.4	39.2		pCi/L					
Cesium-134	U	-1.25	+/-3.71	6.28		pCi/L					
Cesium-136	U	-5.32	+/-9.56	15.4		pCi/L					
Cesium-137	U	-0.266	+/-3.65	6.78	10.0	pCi/L					
Chromium-51	U	-2.78	+/-32.8	58.8		pCi/L					
Cobalt-56	U	4.30	+/-3.83	7.96		pCi/L					
Cobalt-57	U	1.19	+/-2.78	4.92		pCi/L					
Cobalt-58	U	-1.26	+/-4.54	6.99		pCi/L					
Cobalt-60	U	4.84	+/-4.15	9.15		pCi/L					
Europium-152	U	7.92	+/-10.6	19.4		pCi/L					
Europium-154	U	-3.02	+/-10.3	19.3		pCi/L					
Europium-155	U	2.55	+/-12.5	21.8		pCi/L					
Iridium-192	U	-0.869	+/-3.45	6.10		pCi/L					
Iron-59	U	2.28	+/-6.47	13.0		pCi/L					
Lead-210	U	875	+/-1440	1810		pCi/L					
Lead-212	U	1.49	+/-6.23	11.3		pCi/L					
Lead-214	UI	0.00	+/-10.4	16.8		pCi/L					
Manganese-54	U	0.738	+/-4.00	7.49		pCi/L					
Mercury-203	U	0.984	+/-3.64	6.69		pCi/L					
Neodymium-147	U	17.9	+/-38.2	72.3		pCi/L					
Neptunium-239	U	15.3	+/-35.1	52.9		pCi/L					
Niobium-94	U	-0.768	+/-3.62	5.70		pCi/L					
Niobium-95	U	-1.45	+/-3.74	6.67		pCi/L					
Potassium-40	U	-17.6	+/-58.8	102		pCi/L					
Promethium-144	U	-1.47	+/-3.25	5.78		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	365772026	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	UI	0.00	+/-13.6	8.39	pCi/L
Radium-228	U	18.2	+/-13.6	29.2	pCi/L
Ruthenium-106	U	7.88	+/-32.5	62.0	pCi/L
Silver-110m	U	-0.883	+/-3.25	5.93	pCi/L
Sodium-22	U	-0.996	+/-3.63	6.82	pCi/L
Thallium-208	U	5.63	+/-8.65	6.41	pCi/L
Thorium-230	U	-681	+/-2020	2970	pCi/L
Thorium-234	U	-289	+/-257	402	pCi/L
Tin-113	U	-1.19	+/-4.44	7.78	pCi/L
Uranium-235	U	-23.8	+/-25.5	37.3	pCi/L
Uranium-238	U	-289	+/-257	402	pCi/L
Yttrium-88	U	1.81	+/-3.24	7.46	pCi/L
Zinc-65	U	-4.76	+/-9.17	13.0	pCi/L
Zirconium-95	U	4.65	+/-7.85	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.659	+/-1.81	3.50	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta	U	2.47	+/-2.98	4.99	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	88.3	+/-114	192	300	pCi/L	MYM1	02/15/15	1224	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365772027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 09:43		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.74	+/-18.8	29.1		pCi/L		MJH1	02/02/15	0921 1453373	1
Americium-241	U	-15.8	+/-19.8	34.2		pCi/L					
Antimony-124	U	-4.94	+/-9.13	16.3		pCi/L					
Antimony-125	U	7.00	+/-11.2	20.9		pCi/L					
Barium-133	U	6.07	+/-7.24	9.86		pCi/L					
Barium-140	U	-6.1	+/-27.4	48.1		pCi/L					
Beryllium-7	U	3.30	+/-37.1	66.7		pCi/L					
Bismuth-212	U	-3.59	+/-63.8	112		pCi/L					
Bismuth-214		23.3	+/-15.1	14.2		pCi/L					
Cerium-139	U	-0.731	+/-3.62	6.23		pCi/L					
Cerium-141	U	-12.7	+/-9.03	12.0		pCi/L					
Cerium-144	U	-2.49	+/-24.2	42.1		pCi/L					
Cesium-134	U	2.42	+/-4.44	8.57		pCi/L					
Cesium-136	U	-3.9	+/-11.9	17.8		pCi/L					
Cesium-137	U	0.233	+/-4.78	8.46	10.0	pCi/L					
Chromium-51	U	18.5	+/-42.7	78.5		pCi/L					
Cobalt-56	U	-0.253	+/-4.76	8.69		pCi/L					
Cobalt-57	U	0.840	+/-3.14	5.56		pCi/L					
Cobalt-58	U	-2.47	+/-4.66	7.59		pCi/L					
Cobalt-60	U	-3.68	+/-4.32	7.06		pCi/L					
Europium-152	U	7.70	+/-12.7	22.3		pCi/L					
Europium-154	U	4.84	+/-14.9	22.1		pCi/L					
Europium-155	U	-1.21	+/-12.9	22.6		pCi/L					
Iridium-192	U	-0.215	+/-4.25	7.63		pCi/L					
Iron-59	U	3.31	+/-7.92	15.4		pCi/L					
Lead-210	U	-544	+/-566	858		pCi/L					
Lead-212	UI	0.00	+/-16.8	14.6		pCi/L					
Lead-214	U	18.1	+/-16.5	20.3		pCi/L					
Manganese-54	U	2.26	+/-4.25	8.13		pCi/L					
Mercury-203	U	0.392	+/-4.86	8.32		pCi/L					
Neodymium-147	U	11.0	+/-57.3	103		pCi/L					
Neptunium-239	U	-18.4	+/-33.2	56.9		pCi/L					
Niobium-94	U	-1.67	+/-3.92	6.68		pCi/L					
Niobium-95	U	1.85	+/-4.64	8.45		pCi/L					
Potassium-40		71.0	+/-52.2	67.0		pCi/L					
Promethium-144	U	-0.569	+/-4.21	7.34		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 47  
Sample ID: 365772027  
Project: WNUC00127  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.39	+/-5.26	9.01	pCi/L
Radium-228	U	-9.74	+/-18.8	29.1	pCi/L
Ruthenium-106	U	33.5	+/-38.9	66.4	pCi/L
Silver-110m	U	0.456	+/-4.33	7.71	pCi/L
Sodium-22	U	1.71	+/-5.24	7.12	pCi/L
Thallium-208	U	3.20	+/-6.51	7.31	pCi/L
Thorium-230	U	-1150	+/-1330	2290	pCi/L
Thorium-234	U	-312	+/-233	315	pCi/L
Tin-113	U	-1.45	+/-6.07	9.28	pCi/L
Uranium-235	U	-19	+/-31.4	41.9	pCi/L
Uranium-238	U	-312	+/-233	315	pCi/L
Yttrium-88	U	2.83	+/-4.52	9.48	pCi/L
Zinc-65	U	2.43	+/-8.43	14.2	pCi/L
Zirconium-95	U	-1.75	+/-8.19	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.672	+/-2.09	4.28	5.00	pCi/L	AXJ1	02/16/15	0851	1457184	2
Beta		76.0	+/-7.25	3.54	5.00	pCi/L					
Alpha	U	-0.541	+/-1.48	2.71	5.00	pCi/L	AXJ1	02/16/15	1818	1457184	3
Beta		90.2	+/-2.99	1.94	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	153	+/-120	198	300	pCi/L	MYM1	02/15/15	1240	1453898	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.8	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

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Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365772027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	365772028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 09:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.7	+/-19.1	34.6		pCi/L		MJH1	02/02/15	0948 1453373	1
Americium-241	U	-16.5	+/-24.6	37.0		pCi/L					
Antimony-124	U	-11.3	+/-12.2	20.1		pCi/L					
Antimony-125	U	-4.48	+/-11.3	19.0		pCi/L					
Barium-133	U	-1.03	+/-6.04	9.10		pCi/L					
Barium-140	U	-15	+/-38.1	67.9		pCi/L					
Beryllium-7	U	-7.84	+/-37.8	68.8		pCi/L					
Bismuth-212	U	-2.27	+/-57.7	104		pCi/L					
Bismuth-214	U	12.0	+/-14.4	20.1		pCi/L					
Cerium-139	U	1.30	+/-3.74	6.84		pCi/L					
Cerium-141	U	1.10	+/-9.54	15.4		pCi/L					
Cerium-144	U	6.31	+/-26.0	44.6		pCi/L					
Cesium-134	U	3.27	+/-4.93	9.10		pCi/L					
Cesium-136	U	-5.33	+/-14.1	25.5		pCi/L					
Cesium-137	U	-2.25	+/-4.33	7.48	10.0	pCi/L					
Chromium-51	U	28.4	+/-53.7	98.0		pCi/L					
Cobalt-56	U	-0.313	+/-4.71	8.47		pCi/L					
Cobalt-57	U	-2.76	+/-3.34	5.43		pCi/L					
Cobalt-58	UI	0.00	+/-16.8	6.91		pCi/L					
Cobalt-60	U	2.31	+/-4.39	8.89		pCi/L					
Europium-152	U	-3.04	+/-12.4	21.4		pCi/L					
Europium-154	U	2.95	+/-13.9	26.5		pCi/L					
Europium-155	U	2.28	+/-12.7	22.0		pCi/L					
Iridium-192	U	-4.59	+/-4.83	7.96		pCi/L					
Iron-59	U	10.3	+/-11.8	21.7		pCi/L					
Lead-210	U	-300	+/-757	1170		pCi/L					
Lead-212	U	-5.28	+/-9.66	14.7		pCi/L					
Lead-214	U	17.2	+/-16.9	18.2		pCi/L					
Manganese-54	U	-1.3	+/-4.47	7.78		pCi/L					
Mercury-203	U	1.38	+/-5.23	9.40		pCi/L					
Neodymium-147	U	12.1	+/-85.4	160		pCi/L					
Neptunium-239	U	-6.09	+/-33.2	56.1		pCi/L					
Niobium-94	U	-0.664	+/-4.10	7.30		pCi/L					
Niobium-95	U	2.48	+/-4.30	8.40		pCi/L					
Potassium-40	U	0.792	+/-51.3	94.7		pCi/L					
Promethium-144	U	1.17	+/-3.81	7.16		pCi/L					

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## Certificate of Analysis

Report Date: February 17, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Environmental 2014 - PO 4500633068

Client Sample ID: WELL 48 Project: WNUC00127  
Sample ID: 365772028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.885	+/-4.93	8.97	pCi/L
Radium-228	U	-2.7	+/-19.1	34.6	pCi/L
Ruthenium-106	U	1.11	+/-41.0	68.1	pCi/L
Silver-110m	U	0.464	+/-4.02	7.41	pCi/L
Sodium-22	U	1.12	+/-4.92	9.41	pCi/L
Thallium-208	UI	0.00	+/-6.05	7.31	pCi/L
Thorium-230	U	-438	+/-1520	2490	pCi/L
Thorium-234	U	147	+/-277	300	pCi/L
Tin-113	U	4.92	+/-5.47	10.3	pCi/L
Uranium-235	U	-30	+/-32.5	41.1	pCi/L
Uranium-238	U	147	+/-277	300	pCi/L
Yttrium-88	U	-0.552	+/-4.28	8.42	pCi/L
Zinc-65	U	5.03	+/-9.65	19.1	pCi/L
Zirconium-95	U	1.30	+/-8.31	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.64	+/-2.33	4.06	5.00	pCi/L	AXJ1	02/16/15	0849	1457184	2
Beta		7.15	+/-2.78	3.39	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	62.3	+/-118	201	300	pCi/L	MYM1	02/15/15	1257	1453898	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## QC Summary

Report Date: February 17, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 365772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453371										
QC1203252726 365772001 DUP											
Actinium-228	U	6.01	UI	0.00	pCi/L	N/A			N/A MJH1	01/30/15	09:54
	Uncertainty	+/-14.1		+/-15.5							
Americium-241	U	-10.8	U	-8.52	pCi/L	N/A			N/A		
	Uncertainty	+/-30.3		+/-27.9							
Antimony-124	U	2.00	U	4.22	pCi/L	N/A			N/A		
	Uncertainty	+/-9.37		+/-11.8							
Antimony-125	U	-2.08	U	-3.34	pCi/L	N/A			N/A		
	Uncertainty	+/-8.54		+/-10.2							
Barium-133	U	0.623	U	-2.06	pCi/L	N/A			N/A		
	Uncertainty	+/-6.11		+/-5.41							
Barium-140	U	7.03	U	8.84	pCi/L	N/A			N/A		
	Uncertainty	+/-30.0		+/-34.9							
Beryllium-7	U	-8.47	U	8.47	pCi/L	N/A			N/A		
	Uncertainty	+/-37.0		+/-37.5							
Bismuth-212	U	-17.7	U	33.7	pCi/L	N/A			N/A		
	Uncertainty	+/-57.9		+/-56.9							
Bismuth-214	U	9.84	UI	0.00	pCi/L	N/A			N/A		
	Uncertainty	+/-11.1		+/-18.1							
Cerium-139	U	-0.381	U	-3.72	pCi/L	N/A			N/A		
	Uncertainty	+/-3.86		+/-3.38							
Cerium-141	U	0.731	U	-3.78	pCi/L	N/A			N/A		
	Uncertainty	+/-8.79		+/-6.90							
Cerium-144	U	-8.79	U	-7.19	pCi/L	N/A			N/A		
	Uncertainty	+/-21.6		+/-21.5							
Cesium-134	U	-0.973	U	0.899	pCi/L	N/A			N/A		
	Uncertainty	+/-3.65		+/-3.78							
Cesium-136	U	-5.57	U	-6.77	pCi/L	N/A			N/A		
	Uncertainty	+/-12.0		+/-11.1							
Cesium-137	U	-2.77	U	0.227	pCi/L	N/A			N/A		
	Uncertainty	+/-3.40		+/-3.84							
Chromium-51	U	2.39	U	-58.5	pCi/L	N/A			N/A		
	Uncertainty	+/-45.1		+/-45.9							
Cobalt-56	U	1.39	U	-0.22	pCi/L	N/A			N/A		
	Uncertainty	+/-4.01		+/-4.71							
Cobalt-57	U	0.0838	U	3.18	pCi/L	N/A			N/A		
	Uncertainty	+/-2.89		+/-3.01							
Cobalt-58	U	-0.687	U	-0.951	pCi/L	N/A			N/A		
	Uncertainty	+/-3.48		+/-5.08							
Cobalt-60	U	5.59	U	-7.33	pCi/L	N/A			N/A		
	Uncertainty	+/-3.40		+/-9.15							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Europium-152	U	-2.22	U	-3.77	pCi/L	N/A		N/A	MJH1	01/30/15	09:54
	Uncertainty	+/-10.7		+/-10.3							
Europium-154	U	4.59	U	-9.5	pCi/L	N/A		N/A			
	Uncertainty	+/-9.84		+/-10.2							
Europium-155	U	-1.31	U	0.360	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-10.8							
Iridium-192	U	-0.426	U	6.75	pCi/L	N/A		N/A			
	Uncertainty	+/-3.77		+/-4.04							
Iron-59	U	2.73	U	0.664	pCi/L	N/A		N/A			
	Uncertainty	+/-7.99		+/-10.7							
Lead-210	U	431	U	672	pCi/L	N/A		N/A			
	Uncertainty	+/-1290		+/-1210							
Lead-212	U	1.09	U	1.41	pCi/L	N/A		N/A			
	Uncertainty	+/-7.70		+/-10.5							
Lead-214	U	10.8	U	16.2	pCi/L	N/A		N/A			
	Uncertainty	+/-13.2		+/-14.7							
Manganese-54	U	1.02	U	0.528	pCi/L	N/A		N/A			
	Uncertainty	+/-3.60		+/-4.13							
Mercury-203	U	4.20	U	-1.75	pCi/L	N/A		N/A			
	Uncertainty	+/-4.16		+/-4.29							
Neodymium-147	U	-33.8	U	-34.7	pCi/L	N/A		N/A			
	Uncertainty	+/-66.0		+/-86.1							
Neptunium-239	U	-16.3	U	0.114	pCi/L	N/A		N/A			
	Uncertainty	+/-28.8		+/-27.6							
Niobium-94	U	-2.35	U	-0.205	pCi/L	N/A		N/A			
	Uncertainty	+/-4.01		+/-3.88							
Niobium-95	U	2.14	U	2.34	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-5.31							
Potassium-40	U	-40.6	U	-28.5	pCi/L	N/A		N/A			
	Uncertainty	+/-56.2		+/-68.8							
Promethium-144	U	4.17	U	1.90	pCi/L	N/A		N/A			
	Uncertainty	+/-4.33		+/-4.34							
Promethium-146	U	0.251	U	3.49	pCi/L	N/A		N/A			
	Uncertainty	+/-4.76		+/-4.86							
Radium-228	U	6.01	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-15.5							
Ruthenium-106	U	1.04	U	-8.6	pCi/L	N/A		N/A			
	Uncertainty	+/-30.0		+/-33.0							
Silver-110m	U	2.43	U	-2.8	pCi/L	N/A		N/A			
	Uncertainty	+/-3.18		+/-3.63							
Sodium-22	U	1.82	U	-3.32	pCi/L	N/A		N/A			
	Uncertainty	+/-3.51		+/-3.61							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Thallium-208	U	2.65	U	-0.297	pCi/L	N/A		N/A			
	Uncertainty	+/-6.45		+/-5.82							
Thorium-230	U	770	U	-198	pCi/L	N/A		N/A	MJH1	01/30/15	09:54
	Uncertainty	+/-2010		+/-1810							
Thorium-234	U	-306	U	-55.2	pCi/L	N/A		N/A			
	Uncertainty	+/-252		+/-289							
Tin-113	U	4.31	U	-2.21	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-5.37							
Uranium-235	U	12.8	U	1.18	pCi/L	N/A		N/A			
	Uncertainty	+/-31.3		+/-25.2							
Uranium-238	U	-306	U	-55.2	pCi/L	N/A		N/A			
	Uncertainty	+/-252		+/-289							
Yttrium-88	U	3.03	U	-1.23	pCi/L	N/A		N/A			
	Uncertainty	+/-4.64		+/-5.42							
Zinc-65	U	13.3	U	-0.02	pCi/L	N/A		N/A			
	Uncertainty	+/-7.16		+/-8.63							
Zirconium-95	U	4.91	U	-1.82	pCi/L	N/A		N/A			
	Uncertainty	+/-6.57		+/-7.45							
QC1203252727	LCS										
Actinium-228			U	247	pCi/L					01/30/15	10:11
	Uncertainty			+/-1080							
Americium-241	1.10E+05			1.18E+05	pCi/L		107	(75%-125%)			
	Uncertainty			+/-3680							
Antimony-124			U	70.7	pCi/L						
	Uncertainty			+/-183							
Antimony-125			U	413	pCi/L						
	Uncertainty			+/-571							
Barium-133			U	285	pCi/L						
	Uncertainty			+/-376							
Barium-140			U	444	pCi/L						
	Uncertainty			+/-736							
Beryllium-7			U	278	pCi/L						
	Uncertainty			+/-1800							
Bismuth-212			U	1800	pCi/L						
	Uncertainty			+/-2830							
Bismuth-214			U	-36.3	pCi/L						
	Uncertainty			+/-383							
Cerium-139				356	pCi/L						
	Uncertainty			+/-167							
Cerium-141			U	-143	pCi/L						
	Uncertainty			+/-215							
Cerium-144			U	-1040	pCi/L						
	Uncertainty			+/-1050							
Cesium-134			U	72.3	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
				+/-257							
Cesium-136			U	143	pCi/L				MJH1	01/30/15	10:11
	Uncertainty			+/-375							
Cesium-137	44400			44900	pCi/L		101	(75%-125%)			
	Uncertainty			+/-887							
Chromium-51			U	1020	pCi/L						
	Uncertainty			+/-1640							
Cobalt-56			U	5.87	pCi/L						
	Uncertainty			+/-243							
Cobalt-57				2930	pCi/L						
	Uncertainty			+/-212							
Cobalt-58			U	-196	pCi/L						
	Uncertainty			+/-227							
Cobalt-60	52000			53100	pCi/L		102	(75%-125%)			
	Uncertainty			+/-1120							
Europium-152			U	-216	pCi/L						
	Uncertainty			+/-567							
Europium-154			U	71.6	pCi/L						
	Uncertainty			+/-378							
Europium-155			U	-56.1	pCi/L						
	Uncertainty			+/-570							
Iridium-192			U	-113	pCi/L						
	Uncertainty			+/-177							
Iron-59			U	-0.957	pCi/L						
	Uncertainty			+/-527							
Lead-210				1.46E+06	pCi/L						
	Uncertainty			+/-1.09E+05							
Lead-212			U	183	pCi/L						
	Uncertainty			+/-351							
Lead-214			U	337	pCi/L						
	Uncertainty			+/-422							
Manganese-54			U	89.0	pCi/L						
	Uncertainty			+/-232							
Mercury-203			U	-70.1	pCi/L						
	Uncertainty			+/-174							
Neodymium-147			U	1050	pCi/L						
	Uncertainty			+/-1360							
Neptunium-239			U	580	pCi/L						
	Uncertainty			+/-1440							
Niobium-94			U	-158	pCi/L						
	Uncertainty			+/-183							
Niobium-95			U	-33.5	pCi/L						
	Uncertainty			+/-211							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Potassium-40			U	-948	pCi/L						
	Uncertainty			+/-815							
Promethium-144			U	31.5	pCi/L				MJH1	01/30/15	10:11
	Uncertainty			+/-185							
Promethium-146			U	-112	pCi/L						
	Uncertainty			+/-280							
Radium-228			U	247	pCi/L						
	Uncertainty			+/-1080							
Ruthenium-106			U	278	pCi/L						
	Uncertainty			+/-1710							
Silver-110m				1270	pCi/L						
	Uncertainty			+/-254							
Sodium-22			U	19.7	pCi/L						
	Uncertainty			+/-132							
Thallium-208			U	-50.9	pCi/L						
	Uncertainty			+/-198							
Thorium-230			U	12600	pCi/L						
	Uncertainty			+/-79900							
Thorium-234			U	-11500	pCi/L						
	Uncertainty			+/-11000							
Tin-113			U	250	pCi/L						
	Uncertainty			+/-246							
Uranium-235			U	70.7	pCi/L						
	Uncertainty			+/-920							
Uranium-238			U	-11500	pCi/L						
	Uncertainty			+/-11000							
Yttrium-88				231	pCi/L						
	Uncertainty			+/-109							
Zinc-65				8250	pCi/L						
	Uncertainty			+/-1260							
Zirconium-95			U	-124	pCi/L						
	Uncertainty			+/-374							
QC1203252725	MB										
Actinium-228			U	17.8	pCi/L					01/30/15	09:53
	Uncertainty			+/-17.8							
Americium-241			U	5.12	pCi/L						
	Uncertainty			+/-8.52							
Antimony-124			U	5.82	pCi/L						
	Uncertainty			+/-9.48							
Antimony-125			U	-7.52	pCi/L						
	Uncertainty			+/-13.3							
Barium-133			U	-1.76	pCi/L						
	Uncertainty			+/-5.18							
Barium-140			U	-1.15	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453371										
				+/-17.9							
Beryllium-7			U	54.0	pCi/L				MJH1	01/30/15	09:53
	Uncertainty			+/-60.2							
Bismuth-212			U	29.9	pCi/L						
	Uncertainty			+/-74.0							
Bismuth-214			U	1.88	pCi/L						
	Uncertainty			+/-13.1							
Cerium-139			U	1.81	pCi/L						
	Uncertainty			+/-3.03							
Cerium-141			U	3.62	pCi/L						
	Uncertainty			+/-4.32							
Cerium-144			U	19.4	pCi/L						
	Uncertainty			+/-20.3							
Cesium-134			U	-3.55	pCi/L						
	Uncertainty			+/-4.98							
Cesium-136			U	1.20	pCi/L						
	Uncertainty			+/-6.85							
Cesium-137			U	0.731	pCi/L						
	Uncertainty			+/-4.81							
Chromium-51			U	-9.14	pCi/L						
	Uncertainty			+/-33.8							
Cobalt-56			U	-1.68	pCi/L						
	Uncertainty			+/-5.30							
Cobalt-57			U	1.75	pCi/L						
	Uncertainty			+/-2.51							
Cobalt-58			U	1.59	pCi/L						
	Uncertainty			+/-4.79							
Cobalt-60			U	0.716	pCi/L						
	Uncertainty			+/-5.24							
Europium-152			U	-5.39	pCi/L						
	Uncertainty			+/-12.8							
Europium-154			U	12.3	pCi/L						
	Uncertainty			+/-12.2							
Europium-155			U	1.65	pCi/L						
	Uncertainty			+/-10.4							
Iridium-192			U	0.652	pCi/L						
	Uncertainty			+/-4.43							
Iron-59			U	2.44	pCi/L						
	Uncertainty			+/-8.64							
Lead-210			U	7.98	pCi/L						
	Uncertainty			+/-125							
Lead-212			U	-3.4	pCi/L						
	Uncertainty			+/-9.03							

MJH1 01/30/15 09:53

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Lead-214			U	-4.89	pCi/L						
	Uncertainty			+/-9.08							
Manganese-54			U	-2.0	pCi/L				MJH1	01/30/15	09:53
	Uncertainty			+/-4.78							
Mercury-203			U	-0.0448	pCi/L						
	Uncertainty			+/-3.68							
Neodymium-147			U	-25.7	pCi/L						
	Uncertainty			+/-33.7							
Neptunium-239			U	-4.21	pCi/L						
	Uncertainty			+/-27.3							
Niobium-94			U	-2.39	pCi/L						
	Uncertainty			+/-4.87							
Niobium-95			U	2.28	pCi/L						
	Uncertainty			+/-5.49							
Potassium-40			U	-44.1	pCi/L						
	Uncertainty			+/-65.7							
Promethium-144			U	1.68	pCi/L						
	Uncertainty			+/-5.38							
Promethium-146			U	-1.89	pCi/L						
	Uncertainty			+/-5.62							
Radium-228			U	17.8	pCi/L						
	Uncertainty			+/-17.8							
Ruthenium-106			U	-30.2	pCi/L						
	Uncertainty			+/-43.7							
Silver-110m			U	-2.71	pCi/L						
	Uncertainty			+/-4.38							
Sodium-22			U	3.74	pCi/L						
	Uncertainty			+/-4.33							
Thallium-208			U	-1.26	pCi/L						
	Uncertainty			+/-5.88							
Thorium-230			U	-222	pCi/L						
	Uncertainty			+/-660							
Thorium-234			U	17.0	pCi/L						
	Uncertainty			+/-117							
Tin-113			U	0.104	pCi/L						
	Uncertainty			+/-5.65							
Uranium-235			U	5.90	pCi/L						
	Uncertainty			+/-32.0							
Uranium-238			U	17.0	pCi/L						
	Uncertainty			+/-117							
Yttrium-88			U	1.87	pCi/L						
	Uncertainty			+/-4.43							
Zinc-65			U	-3.64	pCi/L						
	Uncertainty			+/-9.50							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453371										
Zirconium-95			U	6.79	pCi/L						
	Uncertainty			+/-8.87							
Batch	1453373										
QC1203252730 365772021 DUP											
Actinium-228	U	17.9	U	22.0	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-19.1		+/-13.4							
Americium-241	U	-10.3	U	4.19	pCi/L	N/A		N/A			
	Uncertainty	+/-26.5		+/-29.7							
Antimony-124	U	1.90	U	-4.16	pCi/L	N/A		N/A			
	Uncertainty	+/-9.91		+/-6.94							
Antimony-125	U	3.69	U	-2.02	pCi/L	N/A		N/A			
	Uncertainty	+/-10.9		+/-9.01							
Barium-133	U	-2.75	U	-1.14	pCi/L	N/A		N/A			
	Uncertainty	+/-5.90		+/-5.42							
Barium-140	U	-20	U	11.8	pCi/L	N/A		N/A			
	Uncertainty	+/-22.0		+/-27.0							
Beryllium-7	U	17.9	U	-6.63	pCi/L	N/A		N/A			
	Uncertainty	+/-36.6		+/-34.1							
Bismuth-212	U	-4.84	U	-3.16	pCi/L	N/A		N/A			
	Uncertainty	+/-56.6		+/-51.3							
Bismuth-214		17.6	U	12.3	pCi/L	25.3		(0% - 100%)			
	Uncertainty	+/-14.0		+/-8.00							
Cerium-139	U	1.16	U	-1.53	pCi/L	N/A		N/A			
	Uncertainty	+/-3.54		+/-3.32							
Cerium-141	U	0.588	U	1.40	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-7.00							
Cerium-144	U	-1.05	U	9.11	pCi/L	N/A		N/A			
	Uncertainty	+/-41.6		+/-25.6							
Cesium-134	U	-3.94	U	2.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.96		+/-4.48							
Cesium-136	U	4.51	U	2.17	pCi/L	N/A		N/A			
	Uncertainty	+/-6.70		+/-8.51							
Cesium-137	U	-2.13	U	-1.07	pCi/L	N/A		N/A			
	Uncertainty	+/-3.95		+/-3.31							
Chromium-51	U	-20.7	U	65.3	pCi/L	N/A		N/A			
	Uncertainty	+/-38.0		+/-47.1							
Cobalt-56	U	-0.119	U	2.28	pCi/L	N/A		N/A			
	Uncertainty	+/-6.37		+/-3.85							
Cobalt-57	U	-3.96	U	2.59	pCi/L	N/A		N/A			
	Uncertainty	+/-3.78		+/-2.82							
Cobalt-58	U	-1.48	U	-1.27	pCi/L	N/A		N/A			
	Uncertainty	+/-4.25		+/-4.00							
Cobalt-60	U	-0.101	U	-0.505	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-3.79							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Europium-152	U	-7.87	U	0.790	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-10.3							
Europium-154	U	7.22	U	-4.6	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-12.6		+/-9.37							
Europium-155	U	5.92	U	-0.314	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-12.1							
Iridium-192	U	1.64	U	-1.66	pCi/L	N/A		N/A			
	Uncertainty	+/-3.98		+/-4.29							
Iron-59	U	2.23	U	-4.5	pCi/L	N/A		N/A			
	Uncertainty	+/-8.17		+/-10.1							
Lead-210	U	49.0	U	-222	pCi/L	N/A		N/A			
	Uncertainty	+/-646		+/-1320							
Lead-212	U	2.21	U	6.03	pCi/L	N/A		N/A			
	Uncertainty	+/-8.80		+/-10.2							
Lead-214	UI	0.00	U	11.7	pCi/L	N/A		N/A			
	Uncertainty	+/-13.0		+/-12.4							
Manganese-54	U	2.39	U	-2.0	pCi/L	N/A		N/A			
	Uncertainty	+/-4.97		+/-3.42							
Mercury-203	U	0.787	U	-1.64	pCi/L	N/A		N/A			
	Uncertainty	+/-4.22		+/-4.30							
Neodymium-147	U	11.1	U	23.5	pCi/L	N/A		N/A			
	Uncertainty	+/-43.1		+/-48.7							
Neptunium-239	U	28.7	U	-23.2	pCi/L	N/A		N/A			
	Uncertainty	+/-34.0		+/-29.9							
Niobium-94	U	0.672	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.59		+/-3.72							
Niobium-95	U	-1.9	U	3.12	pCi/L	N/A		N/A			
	Uncertainty	+/-4.03		+/-3.51							
Potassium-40	U	8.28	U	-3.61	pCi/L	N/A		N/A			
	Uncertainty	+/-62.3		+/-55.3							
Promethium-144	U	-0.958	U	0.965	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-3.46							
Promethium-146	U	4.55	U	0.671	pCi/L	N/A		N/A			
	Uncertainty	+/-5.05		+/-4.41							
Radium-228	U	17.9	U	22.0	pCi/L	N/A		N/A			
	Uncertainty	+/-19.1		+/-13.4							
Ruthenium-106	U	27.7	U	7.54	pCi/L	N/A		N/A			
	Uncertainty	+/-36.1		+/-32.0							
Silver-110m	U	0.172	U	2.71	pCi/L	N/A		N/A			
	Uncertainty	+/-3.61		+/-3.04							
Sodium-22	U	2.21	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-4.49		+/-3.34							
Thallium-208	U	-0.838	U	1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-5.56		+/-5.06							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Thorium-230	U	-1210	U	1250	pCi/L	N/A		N/A			
	Uncertainty	+/-1660		+/-2360							
Thorium-234	U	14.0	U	247	pCi/L	N/A		N/A	MJH1	02/02/15	09:54
	Uncertainty	+/-269		+/-256							
Tin-113	U	0.754	U	-2.24	pCi/L	N/A		N/A			
	Uncertainty	+/-6.73		+/-5.02							
Uranium-235	U	-13	U	20.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.3		+/-31.8							
Uranium-238	U	14.0	U	247	pCi/L	N/A		N/A			
	Uncertainty	+/-269		+/-256							
Yttrium-88	U	-3.21	U	-1.24	pCi/L	N/A		N/A			
	Uncertainty	+/-4.79		+/-5.08							
Zinc-65	U	-10.3	U	-2.78	pCi/L	N/A		N/A			
	Uncertainty	+/-9.59		+/-8.02							
Zirconium-95	U	-1.03	U	-0.14	pCi/L	N/A		N/A			
	Uncertainty	+/-7.75		+/-7.20							
QC1203252731	LCS										
Actinium-228				1630	pCi/L					02/02/15	10:06
	Uncertainty			+/-900							
Americium-241	1.10E+05			1.14E+05	pCi/L		103	(75%-125%)			
	Uncertainty			+/-2340							
Antimony-124			U	116	pCi/L						
	Uncertainty			+/-185							
Antimony-125			U	-465	pCi/L						
	Uncertainty			+/-487							
Barium-133			U	-69.9	pCi/L						
	Uncertainty			+/-202							
Barium-140			U	947	pCi/L						
	Uncertainty			+/-923							
Beryllium-7			U	308	pCi/L						
	Uncertainty			+/-1480							
Bismuth-212			U	1300	pCi/L						
	Uncertainty			+/-2250							
Bismuth-214			U	-84	pCi/L						
	Uncertainty			+/-300							
Cerium-139				376	pCi/L						
	Uncertainty			+/-169							
Cerium-141			U	31.7	pCi/L						
	Uncertainty			+/-190							
Cerium-144			U	82.8	pCi/L						
	Uncertainty			+/-832							
Cesium-134			U	68.1	pCi/L						
	Uncertainty			+/-236							
Cesium-136			U	-155	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
				+/-359							
Cesium-137	44400			44600	pCi/L		100	(75%-125%)	MJH1	02/02/15	10:06
	Uncertainty			+/-783							
Chromium-51			U	-734	pCi/L						
	Uncertainty			+/-1380							
Cobalt-56			U	-175	pCi/L						
	Uncertainty			+/-203							
Cobalt-57				2740	pCi/L						
	Uncertainty			+/-190							
Cobalt-58			U	20.0	pCi/L						
	Uncertainty			+/-184							
Cobalt-60	52000			52500	pCi/L		101	(75%-125%)			
	Uncertainty			+/-961							
Europium-152			U	46.8	pCi/L						
	Uncertainty			+/-455							
Europium-154			U	9.06	pCi/L						
	Uncertainty			+/-296							
Europium-155			U	-51.2	pCi/L						
	Uncertainty			+/-400							
Iridium-192			U	89.2	pCi/L						
	Uncertainty			+/-173							
Iron-59			U	282	pCi/L						
	Uncertainty			+/-454							
Lead-210				1.57E+06	pCi/L						
	Uncertainty			+/-35800							
Lead-212			U	-136	pCi/L						
	Uncertainty			+/-256							
Lead-214			U	32.5	pCi/L						
	Uncertainty			+/-340							
Manganese-54			U	66.2	pCi/L						
	Uncertainty			+/-188							
Mercury-203			U	-26.3	pCi/L						
	Uncertainty			+/-149							
Neodymium-147			U	473	pCi/L						
	Uncertainty			+/-1870							
Neptunium-239			U	-657	pCi/L						
	Uncertainty			+/-1160							
Niobium-94			U	123	pCi/L						
	Uncertainty			+/-145							
Niobium-95			U	-12.3	pCi/L						
	Uncertainty			+/-169							
Potassium-40			U	-17.4	pCi/L						
	Uncertainty			+/-747							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1453373										
Promethium-144			U	-14.3	pCi/L						
	Uncertainty			+/-147							
Promethium-146			U	74.7	pCi/L				MJH1	02/02/15	10:06
	Uncertainty			+/-237							
Radium-228				1630	pCi/L						
	Uncertainty			+/-900							
Ruthenium-106			U	270	pCi/L						
	Uncertainty			+/-1400							
Silver-110m				1040	pCi/L						
	Uncertainty			+/-209							
Sodium-22			U	-15.1	pCi/L						
	Uncertainty			+/-107							
Thallium-208			U	77.5	pCi/L						
	Uncertainty			+/-155							
Thorium-230			U	41400	pCi/L						
	Uncertainty			+/-48000							
Thorium-234			U	-7200	pCi/L						
	Uncertainty			+/-5910							
Tin-113			U	263	pCi/L						
	Uncertainty			+/-314							
Uranium-235			U	-173	pCi/L						
	Uncertainty			+/-759							
Uranium-238			U	-7200	pCi/L						
	Uncertainty			+/-5910							
Yttrium-88				222	pCi/L						
	Uncertainty			+/-121							
Zinc-65				8400	pCi/L						
	Uncertainty			+/-994							
Zirconium-95			U	322	pCi/L						
	Uncertainty			+/-311							
QC1203252729	MB										
Actinium-228			U	3.85	pCi/L					02/02/15	09:53
	Uncertainty			+/-27.7							
Americium-241			U	3.85	pCi/L						
	Uncertainty			+/-21.7							
Antimony-124			U	1.88	pCi/L						
	Uncertainty			+/-10.3							
Antimony-125			U	-6.11	pCi/L						
	Uncertainty			+/-10.3							
Barium-133			U	5.40	pCi/L						
	Uncertainty			+/-5.26							
Barium-140			U	11.8	pCi/L						
	Uncertainty			+/-16.9							
Beryllium-7			U	-4.56	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453373										
Bismuth-212	Uncertainty		U	+/-32.5	pCi/L						
				30.3							
Bismuth-214	Uncertainty		UI	+/-61.9	pCi/L						
				0.00							
Cerium-139	Uncertainty		U	+/-19.7	pCi/L						
				1.83							
Cerium-141	Uncertainty		U	+/-3.41	pCi/L						
				3.00							
Cerium-144	Uncertainty		U	+/-5.26	pCi/L						
				-5.83							
Cesium-134	Uncertainty		U	+/-21.6	pCi/L						
				1.32							
Cesium-136	Uncertainty		U	+/-4.38	pCi/L						
				2.01							
Cesium-137	Uncertainty		U	+/-6.05	pCi/L						
				1.19							
Chromium-51	Uncertainty		U	+/-4.16	pCi/L						
				-0.113							
Cobalt-56	Uncertainty		U	+/-34.2	pCi/L						
				0.227							
Cobalt-57	Uncertainty		U	+/-4.68	pCi/L						
				-0.0847							
Cobalt-58	Uncertainty		U	+/-2.63	pCi/L						
				1.62							
Cobalt-60	Uncertainty		U	+/-4.23	pCi/L						
				0.327							
Europium-152	Uncertainty		U	+/-4.24	pCi/L						
				14.0							
Europium-154	Uncertainty		U	+/-11.2	pCi/L						
				14.8							
Europium-155	Uncertainty		U	+/-12.7	pCi/L						
				4.07							
Iridium-192	Uncertainty		U	+/-11.6	pCi/L						
				0.486							
Iron-59	Uncertainty		U	+/-3.76	pCi/L						
				-1.37							
Lead-210	Uncertainty		U	+/-6.87	pCi/L						
				588							
Lead-212	Uncertainty		U	+/-816	pCi/L						
				2.78							
Lead-214	Uncertainty		U	+/-10.1	pCi/L						
				3.95							
	Uncertainty			+/-14.7							

MJH1 02/02/15 09:53

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1453373										
Manganese-54			U	3.95	pCi/L						
	Uncertainty			+/-4.24							
Mercury-203			U	-1.09	pCi/L				MJH1	02/02/15	09:53
	Uncertainty			+/-3.73							
Neodymium-147			U	-16.6	pCi/L						
	Uncertainty			+/-33.0							
Neptunium-239			U	5.95	pCi/L						
	Uncertainty			+/-27.9							
Niobium-94			U	-2.37	pCi/L						
	Uncertainty			+/-3.87							
Niobium-95			U	3.06	pCi/L						
	Uncertainty			+/-4.77							
Potassium-40			U	7.13	pCi/L						
	Uncertainty			+/-68.6							
Promethium-144			U	0.00321	pCi/L						
	Uncertainty			+/-3.86							
Promethium-146			U	-0.227	pCi/L						
	Uncertainty			+/-5.00							
Radium-228			U	3.85	pCi/L						
	Uncertainty			+/-27.7							
Ruthenium-106			U	6.16	pCi/L						
	Uncertainty			+/-36.9							
Silver-110m			U	-0.432	pCi/L						
	Uncertainty			+/-3.97							
Sodium-22			U	5.14	pCi/L						
	Uncertainty			+/-4.43							
Thallium-208			U	-1.21	pCi/L						
	Uncertainty			+/-5.85							
Thorium-230			U	-938	pCi/L						
	Uncertainty			+/-1490							
Thorium-234			U	57.7	pCi/L						
	Uncertainty			+/-376							
Tin-113			U	2.43	pCi/L						
	Uncertainty			+/-5.01							
Uranium-235			U	-24.9	pCi/L						
	Uncertainty			+/-27.8							
Uranium-238			U	57.7	pCi/L						
	Uncertainty			+/-376							
Yttrium-88			U	-1.7	pCi/L						
	Uncertainty			+/-5.38							
Zinc-65			U	6.73	pCi/L						
	Uncertainty			+/-8.44							
Zirconium-95			U	1.02	pCi/L						
	Uncertainty			+/-6.54							

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1457183										
QC1203263279	365772001	DUP									
Alpha	U	1.15	U	1.15	pCi/L	N/A		N/A	KXB2	02/16/15	09:30
	Uncertainty	+/-2.46		+/-2.32							
Beta		11.5		10.9	pCi/L	5.92		(0% - 100%)			
	Uncertainty	+/-3.34		+/-3.40							
QC1203263282	LCS										
Alpha	122			143	pCi/L		117	(75%-125%)		02/17/15	06:52
	Uncertainty			+/-13.1							
Beta	474			551	pCi/L		116	(75%-125%)			
	Uncertainty			+/-19.1							
QC1203263278	MB										
Alpha			U	-2.04	pCi/L					02/16/15	09:30
	Uncertainty			+/-1.04							
Beta			U	-1.48	pCi/L						
	Uncertainty			+/-2.56							
QC1203263280	365772001	MS									
Alpha	486 U	1.15		495	pCi/L		102	(75%-125%)		02/17/15	06:52
	Uncertainty	+/-2.46		+/-53.4							
Beta	1900	11.5		2170	pCi/L		114	(75%-125%)			
	Uncertainty	+/-3.34		+/-76.1							
QC1203263281	365772001	MSD									
Alpha	486 U	1.15		496	pCi/L	0.263	102	(0%-20%)		02/17/15	06:52
	Uncertainty	+/-2.46		+/-51.3							
Beta	1900	11.5		2220	pCi/L	1.87	116	(0%-20%)			
	Uncertainty	+/-3.34		+/-76.2							
Batch	1457184										
QC1203263284	365772015	DUP									
Alpha	U	-0.189	U	1.76	pCi/L	N/A		N/A	AXJ1	02/16/15	08:50
	Uncertainty	+/-1.84		+/-2.50							
Beta		11.6		10.3	pCi/L	12.1		(0% - 100%)			
	Uncertainty	+/-3.51		+/-3.39							
QC1203263287	LCS										
Alpha	122			135	pCi/L		111	(75%-125%)		02/16/15	08:49
	Uncertainty			+/-12.3							
Beta	474			553	pCi/L		117	(75%-125%)			
	Uncertainty			+/-19.1							
QC1203263283	MB										
Alpha			U	-0.513	pCi/L					02/16/15	08:51
	Uncertainty			+/-1.14							
Beta			U	-1.63	pCi/L						
	Uncertainty			+/-2.57							
QC1203263285	365772015	MS									
Alpha	486 U	-0.189		600	pCi/L		123	(75%-125%)		02/16/15	08:51
	Uncertainty	+/-1.84		+/-58.3							
Beta	1900	11.6		2320	pCi/L		122	(75%-125%)			
	Uncertainty	+/-3.51		+/-81.8							
QC1203263286	365772015	MSD									

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1457184										
Alpha	486	U	-0.189	595	pCi/L	0.942	122	(0%-20%)		02/16/15	18:17
	Uncertainty		+/-1.84	+/-54.0							
Beta	1900		11.6	2200	pCi/L	5.31	115	(0%-20%)	AXJ1		
	Uncertainty		+/-3.51	+/-75.8							
<b>Rad Liquid Scintillation</b>											
Batch	1453895										
QC1203254136	365648001	DUP									
Technetium-99		U	-41.1	U	-5.81	pCi/L	N/A		N/AMYM1	02/10/15	10:21
		Uncertainty	+/-122		+/-126						
QC1203254137	LCS										
Technetium-99	4340				4110	pCi/L	94.7	(75%-125%)		02/10/15	10:37
	Uncertainty				+/-240						
QC1203254135	MB										
Technetium-99			U		-68.1	pCi/L				02/10/15	10:04
		Uncertainty			+/-120						
Batch	1453898										
QC1203254140	365772016	DUP									
Technetium-99		U	63.0	U	49.3	pCi/L	N/A		N/AMYM1	02/15/15	15:43
		Uncertainty	+/-118		+/-119						
QC1203254141	LCS										
Technetium-99	4340				3830	pCi/L	88.1	(75%-125%)		02/15/15	16:00
	Uncertainty				+/-225						
QC1203254139	MB										
Technetium-99			U		-5.43	pCi/L				02/15/15	15:27
		Uncertainty			+/-114						

### 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 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



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## QC Summary

Workorder: 365772

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 17 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12



May 19, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Ground Water Well Liquid Analysis  
Work Order: 371595

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: April

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

371595

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/9/15 09:46	1000	X	X	X		X	REC
WELL	#3A	4/16/15 09:18	1000	X	X	X		X	REC
WELL	#7	4/13/15 11:28	1000	X	X	X		X	REC
WELL	#10	4/13/15 11:43	1000	X	X	X		X	REC
WELL	#13R	4/13/15 11:08	1000	X	X	X		X	REC
WELL	#14	4/14/15 11:37	1000	X	X	X		X	REC
WELL	#15	4/14/15 10:55	1000	X	X	X		X	REC
WELL	#16	4/14/15 11:52	1000	X	X	X		X	REC
WELL	#17	4/14/15 09:01	1000	X	X	X		X	REC
WELL	#18	4/13/15 10:17	1000	X	X	X		X	REC
WELL	#20	4/16/15 10:05	1000	X	X	X		X	REC
WELL	#22	4/13/15 09:58	1000	X	X	X		X	REC
WELL	#23R	4/14/15 11:13	1000	X	X	X		X	REC
WELL	#24	4/14/15 08:26	1000	X	X	X		X	REC
WELL	#26	4/9/15 10:57	1000	X	X	X		X	REC
WELL	#27	4/16/15 09:40	1000	X	X	X		X	REC
WELL	#28	4/13/15 10:40	1000	X	X	X		X	REC
WELL	#29	4/13/15 09:19	1000	X	X	X		X	REC
WELL	#30	4/13/15 09:38	1000	X	X	X		X	REC
WELL	#32	4/13/15 12:03	1000	X	X	X		X	REC
WELL	#33	4/14/15 10:10	1000	X	X	X		X	REC
WELL	#38	4/13/15 08:57	1000	X	X	X		X	REC
WELL	#39	4/14/15 09:28	1000	X	X	X		X	REC
WELL	#41R	4/9/15 10:09	1000	X	X	X		X	REC
WELL	#43	4/14/15 09:50	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 4/22/15

Printed Copies are Uncontrolled

Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.

Rec'd by -- P. Went

Date -- 4-22-15 TIME -- 16:30

Year: **2015**

371595

[illegible]

Date Shipped: 4/22/15  
RLR Block 8/22/15 1630

DATE - 3-22-15 TIME - 16:30

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client:		SDG/AR/COC/Work Order: <u>371395</u>	
Received By: <u>P. J. Dent</u>		Date Received: <u>4.22.15</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0/cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>17c</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>201404336</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?			<input checked="" type="checkbox"/>	Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?			<input checked="" type="checkbox"/>	Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?			<input checked="" type="checkbox"/>	
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS <u>Field Services</u> <u>Courier</u> Other  <u>Gel's</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 371595 GEL Work Order: 371595

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371595001  
Matrix: Ground Water  
Collect Date: 09-APR-15 09:46  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-20.4	+/-19.4	30.4		pCi/L		MJH1	04/28/15	0912	1474077	1
Americium-241	U	16.3	+/-33.1	52.9		pCi/L						
Antimony-124	U	1.18	+/-11.0	21.7		pCi/L						
Antimony-125	U	4.83	+/-11.1	18.4		pCi/L						
Barium-133	U	-1.35	+/-4.94	8.37		pCi/L						
Barium-140	U	-19.2	+/-35.7	61.5		pCi/L						
Beryllium-7	U	6.01	+/-34.2	63.4		pCi/L						
Bismuth-212	U	-15.9	+/-59.9	97.4		pCi/L						
Bismuth-214	U	-14.7	+/-12.6	15.2		pCi/L						
Cerium-139	U	1.65	+/-3.47	5.67		pCi/L						
Cerium-141	U	-4.61	+/-7.43	12.9		pCi/L						
Cerium-144	U	6.76	+/-21.3	39.0		pCi/L						
Cesium-134	U	2.56	+/-4.31	8.47		pCi/L						
Cesium-136	U	-3.66	+/-13.3	24.0		pCi/L						
Cesium-137	U	-0.249	+/-3.89	6.96	10.0	pCi/L						
Chromium-51	U	-6.74	+/-47.8	82.3		pCi/L						
Cobalt-56	U	4.67	+/-4.26	8.79		pCi/L						
Cobalt-57	U	-1.17	+/-2.86	5.06		pCi/L						
Cobalt-58	U	-1.73	+/-3.90	6.99		pCi/L						
Cobalt-60	U	-1.91	+/-3.57	6.42		pCi/L						
Europium-152	U	-2.24	+/-11.5	19.6		pCi/L						
Europium-154	U	13.8	+/-12.4	26.1		pCi/L						
Europium-155	U	0.070	+/-12.2	22.1		pCi/L						
Iridium-192	U	-0.259	+/-4.31	7.46		pCi/L						
Iron-59	U	-5.36	+/-9.49	16.3		pCi/L						
Lead-210	U	1440	+/-1180	2200		pCi/L						
Lead-212	U	-12.4	+/-8.93	12.6		pCi/L						
Lead-214	U	-6.17	+/-10.3	15.6		pCi/L						
Manganese-54	U	-0.225	+/-3.91	7.24		pCi/L						
Mercury-203	U	-0.0597	+/-4.46	7.79		pCi/L						
Neodymium-147	U	3.63	+/-74.6	136		pCi/L						
Neptunium-239	U	-14.6	+/-31.1	54.9		pCi/L						
Niobium-94	U	-2.19	+/-3.66	6.14		pCi/L						
Niobium-95	U	-0.0521	+/-5.00	8.06		pCi/L						
Potassium-40	U	-66.8	+/-48.7	76.5		pCi/L						
Promethium-144	U	1.11	+/-3.63	6.71		pCi/L						

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371595001

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.140	+/-4.61	8.42	pCi/L
Radium-228	U	-20.4	+/-19.4	30.4	pCi/L
Ruthenium-106	U	15.2	+/-33.4	61.6	pCi/L
Silver-110m	U	1.57	+/-3.68	6.91	pCi/L
Sodium-22	U	4.95	+/-4.39	9.24	pCi/L
Thallium-208	U	-0.92	+/-5.08	7.79	pCi/L
Thorium-230	U	-1060	+/-1770	2770	pCi/L
Thorium-234	U	55.9	+/-404	466	pCi/L
Tin-113	U	2.13	+/-5.23	9.79	pCi/L
Uranium-235	U	-29	+/-27.1	40.6	pCi/L
Uranium-238	U	55.9	+/-404	466	pCi/L
Yttrium-88	U	5.65	+/-5.00	11.2	pCi/L
Zinc-65	U	0.997	+/-10.5	16.9	pCi/L
Zirconium-95	U	-1.64	+/-8.86	13.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.764	+/-0.850	1.67	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		6.31	+/-1.06	1.38	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-53.1	+/-116	206	300	pCi/L	MYM1	05/18/15	1141	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			99.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 3A	Project:	WNUC00129
Sample ID:	371595002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:18		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228		29.2	+/-20.5	19.7		pCi/L		MJH1	04/28/15	0925 1474077	1
Americium-241	U	11.4	+/-22.6	38.2		pCi/L					
Antimony-124	U	-1.65	+/-7.54	14.3		pCi/L					
Antimony-125	U	-7.27	+/-8.57	14.3		pCi/L					
Barium-133	U	-1.36	+/-4.12	6.35		pCi/L					
Barium-140	U	17.6	+/-24.3	39.5		pCi/L					
Beryllium-7	U	25.6	+/-27.2	53.4		pCi/L					
Bismuth-212	U	19.7	+/-47.3	82.3		pCi/L					
Bismuth-214		15.1	+/-13.3	11.8		pCi/L					
Cerium-139	U	0.334	+/-2.81	4.90		pCi/L					
Cerium-141	U	1.82	+/-9.42	9.49		pCi/L					
Cerium-144	U	-0.342	+/-18.4	32.2		pCi/L					
Cesium-134	U	-0.82	+/-4.63	7.15		pCi/L					
Cesium-136	U	-4.01	+/-8.70	15.1		pCi/L					
Cesium-137	U	4.22	+/-3.30	6.88	10.0	pCi/L					
Chromium-51	U	5.29	+/-33.1	60.6		pCi/L					
Cobalt-56	U	-0.402	+/-3.29	6.07		pCi/L					
Cobalt-57	U	-0.785	+/-2.48	4.27		pCi/L					
Cobalt-58	U	0.383	+/-3.86	6.57		pCi/L					
Cobalt-60	U	0.0181	+/-3.19	6.26		pCi/L					
Europium-152	U	-7.42	+/-10.4	15.4		pCi/L					
Europium-154	U	8.37	+/-7.77	20.8		pCi/L					
Europium-155	U	-8.1	+/-11.7	17.5		pCi/L					
Iridium-192	U	-0.156	+/-3.14	5.69		pCi/L					
Iron-59	U	-6.77	+/-7.16	11.5		pCi/L					
Lead-210	U	408	+/-690	1300		pCi/L					
Lead-212	U	-0.482	+/-8.29	12.3		pCi/L					
Lead-214		26.1	+/-13.2	18.0		pCi/L					
Manganese-54	U	-1.78	+/-3.00	5.23		pCi/L					
Mercury-203	U	-6.62	+/-3.70	5.29		pCi/L					
Neodymium-147	U	-1.39	+/-39.2	70.7		pCi/L					
Neptunium-239	U	-11.3	+/-26.5	45.4		pCi/L					
Niobium-94	U	-1.42	+/-2.79	4.97		pCi/L					
Niobium-95	U	-2.91	+/-4.62	7.04		pCi/L					
Potassium-40	U	-30.2	+/-48.9	92.0		pCi/L					
Promethium-144	U	0.242	+/-3.13	5.88		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 371595002

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.84	+/-4.20	7.26	pCi/L
Radium-228		29.2	+/-20.5	19.7	pCi/L
Ruthenium-106	U	-17	+/-28.6	47.6	pCi/L
Silver-110m	U	-2.42	+/-3.23	5.63	pCi/L
Sodium-22	U	2.95	+/-2.74	7.18	pCi/L
Thallium-208	U	-4.33	+/-5.16	7.35	pCi/L
Thorium-230	U	996	+/-1710	2430	pCi/L
Thorium-234	U	76.2	+/-246	394	pCi/L
Tin-113	U	-1.73	+/-3.95	6.89	pCi/L
Uranium-235	U	6.18	+/-32.1	31.5	pCi/L
Uranium-238	U	76.2	+/-246	394	pCi/L
Yttrium-88	U	-2.87	+/-3.60	5.90	pCi/L
Zinc-65	U	-6.19	+/-8.45	11.5	pCi/L
Zirconium-95	U	-0.173	+/-5.56	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.348	+/-0.709	1.24	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta	U	1.18	+/-0.940	1.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-77	+/-119	214	300	pCi/L	MYM1	05/18/15	1157	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	371595003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.6	+/-22.8	24.9		pCi/L		MJH1	04/28/15	0955 1474077	1
Americium-241	U	13.9	+/-23.1	42.8		pCi/L					
Antimony-124	U	8.51	+/-11.1	23.5		pCi/L					
Antimony-125	U	-1.77	+/-11.3	19.5		pCi/L					
Barium-133	U	5.88	+/-5.90	9.03		pCi/L					
Barium-140	U	-12.9	+/-32.6	57.7		pCi/L					
Beryllium-7	U	4.72	+/-40.0	70.1		pCi/L					
Bismuth-212	U	97.2	+/-69.3	109		pCi/L					
Bismuth-214		24.0	+/-16.2	14.3		pCi/L					
Cerium-139	U	-1.74	+/-3.71	6.18		pCi/L					
Cerium-141	U	2.67	+/-7.98	13.9		pCi/L					
Cerium-144	U	24.4	+/-23.8	43.2		pCi/L					
Cesium-134	U	-0.322	+/-5.41	8.29		pCi/L					
Cesium-136	U	-8.17	+/-12.3	21.2		pCi/L					
Cesium-137	U	-1.6	+/-5.18	8.12	10.0	pCi/L					
Chromium-51	U	-39.6	+/-45.2	75.9		pCi/L					
Cobalt-56	U	1.58	+/-5.31	9.62		pCi/L					
Cobalt-57	U	-2.43	+/-2.95	4.93		pCi/L					
Cobalt-58	U	5.92	+/-7.67	7.67		pCi/L					
Cobalt-60	U	2.19	+/-4.33	8.53		pCi/L					
Europium-152	U	3.52	+/-13.4	21.1		pCi/L					
Europium-154	U	1.62	+/-13.1	24.5		pCi/L					
Europium-155	U	-0.744	+/-15.0	23.0		pCi/L					
Iridium-192	U	2.47	+/-4.21	7.71		pCi/L					
Iron-59	U	4.76	+/-10.6	20.2		pCi/L					
Lead-210	U	-769	+/-891	1170		pCi/L					
Lead-212	U	-5.68	+/-8.19	13.0		pCi/L					
Lead-214	U	10.3	+/-12.4	18.5		pCi/L					
Manganese-54	U	-2.04	+/-4.36	7.41		pCi/L					
Mercury-203	U	-2.35	+/-4.43	7.68		pCi/L					
Neodymium-147	U	20.4	+/-65.2	122		pCi/L					
Neptunium-239	U	-5.37	+/-31.9	55.3		pCi/L					
Niobium-94	U	1.36	+/-4.04	6.61		pCi/L					
Niobium-95	U	-2.3	+/-5.65	8.81		pCi/L					
Potassium-40	U	-31.6	+/-66.8	121		pCi/L					
Promethium-144	U	-0.861	+/-5.12	7.77		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 7 Project: WNUC00129  
Sample ID: 371595003 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.417	+/-5.30	9.28	pCi/L
Radium-228	U	11.6	+/-22.8	24.9	pCi/L
Ruthenium-106	U	-6.15	+/-34.4	61.8	pCi/L
Silver-110m	U	-1.14	+/-4.26	7.51	pCi/L
Sodium-22	U	0.571	+/-4.64	8.64	pCi/L
Thallium-208	U	1.18	+/-6.18	7.24	pCi/L
Thorium-230	U	946	+/-1450	2670	pCi/L
Thorium-234	U	-185	+/-262	432	pCi/L
Tin-113	U	-0.85	+/-5.58	9.69	pCi/L
Uranium-235	U	2.64	+/-30.1	47.0	pCi/L
Uranium-238	U	-185	+/-262	432	pCi/L
Yttrium-88	U	-2.19	+/-5.68	8.37	pCi/L
Zinc-65	U	-8.21	+/-10.2	17.2	pCi/L
Zirconium-95	U	2.37	+/-7.91	14.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.02	+/-3.23	4.41	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		109	+/-4.14	3.24	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	52.1	+/-125	215	300	pCi/L	MYM1	05/18/15	1214	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 371595004  
Matrix: Ground Water  
Collect Date: 13-APR-15 11:43  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-3.64	+/-19.1	30.2		pCi/L		MJH1	04/28/15	0956 1474077	1
Americium-241	U	17.6	+/-32.5	55.0		pCi/L					
Antimony-124	U	-0.572	+/-9.80	19.3		pCi/L					
Antimony-125	U	4.70	+/-10.7	18.0		pCi/L					
Barium-133	U	-1.55	+/-5.32	8.19		pCi/L					
Barium-140	U	29.9	+/-28.0	55.9		pCi/L					
Beryllium-7	U	17.5	+/-35.3	66.4		pCi/L					
Bismuth-212	U	-3.67	+/-47.2	88.6		pCi/L					
Bismuth-214	U	12.3	+/-12.9	19.1		pCi/L					
Cerium-139	U	1.76	+/-3.13	5.62		pCi/L					
Cerium-141	U	-2.7	+/-7.08	11.4		pCi/L					
Cerium-144	U	5.51	+/-21.5	38.2		pCi/L					
Cesium-134	U	1.74	+/-3.79	7.08		pCi/L					
Cesium-136	U	0.606	+/-10.9	20.4		pCi/L					
Cesium-137	U	-0.729	+/-3.68	6.81	10.0	pCi/L					
Chromium-51	U	28.1	+/-39.6	75.7		pCi/L					
Cobalt-56	U	1.03	+/-3.91	7.60		pCi/L					
Cobalt-57	U	-1.58	+/-2.95	4.97		pCi/L					
Cobalt-58	U	0.262	+/-3.79	6.87		pCi/L					
Cobalt-60	U	-0.389	+/-3.86	7.49		pCi/L					
Europium-152	U	-0.00448	+/-9.76	17.8		pCi/L					
Europium-154	U	3.64	+/-11.0	22.6		pCi/L					
Europium-155	U	0.160	+/-11.3	20.1		pCi/L					
Iridium-192	U	-2.29	+/-3.65	6.33		pCi/L					
Iron-59	U	1.01	+/-7.16	14.1		pCi/L					
Lead-210	U	1370	+/-1520	2570		pCi/L					
Lead-212	U	9.47	+/-10.0	13.6		pCi/L					
Lead-214	U	3.96	+/-13.0	17.4		pCi/L					
Manganese-54	U	-2.62	+/-3.90	6.72		pCi/L					
Mercury-203	U	1.38	+/-4.21	7.81		pCi/L					
Neodymium-147	U	87.3	+/-63.8	129		pCi/L					
Neptunium-239	U	17.9	+/-28.7	52.4		pCi/L					
Niobium-94	U	0.584	+/-3.77	7.12		pCi/L					
Niobium-95	U	0.237	+/-3.79	7.22		pCi/L					
Potassium-40	U	40.9	+/-49.6	61.0		pCi/L					
Promethium-144	U	-0.991	+/-3.55	6.47		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 371595004

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.05	+/-4.48	7.92	pCi/L
Radium-228	U	-3.64	+/-19.1	30.2	pCi/L
Ruthenium-106	U	11.0	+/-32.4	60.4	pCi/L
Silver-110m	U	-0.964	+/-3.77	5.98	pCi/L
Sodium-22	U	1.43	+/-3.91	8.06	pCi/L
Thallium-208	U	-2.63	+/-5.35	7.94	pCi/L
Thorium-230	UI	0.00	+/-3270	2820	pCi/L
Thorium-234	U	135	+/-381	442	pCi/L
Tin-113	U	-1.6	+/-4.53	7.97	pCi/L
Uranium-235	U	4.46	+/-27.4	39.7	pCi/L
Uranium-238	U	135	+/-381	442	pCi/L
Yttrium-88	U	0.821	+/-3.60	7.80	pCi/L
Zinc-65	U	-10.9	+/-8.52	12.7	pCi/L
Zirconium-95	U	-3.49	+/-6.96	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.40	+/-1.59	2.66	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		92.7	+/-3.04	1.67	5.00	pCi/L					
Alpha	U	1.92	+/-1.56	2.48	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		85.0	+/-2.81	1.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-59.8	+/-124	220	300	pCi/L	MYM1	05/18/15	1230	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.6	(15%-125%)

Notes:



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 371595004

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371595005  
Matrix: Ground Water  
Collect Date: 13-APR-15 11:08  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.04	+/-24.7	33.7		pCi/L		MJH1	04/28/15	0956 1474077	1
Americium-241	U	-12.7	+/-25.9	43.8		pCi/L					
Antimony-124	U	-1.56	+/-9.79	18.7		pCi/L					
Antimony-125	U	-1.64	+/-9.48	17.2		pCi/L					
Barium-133	U	2.07	+/-5.46	8.65		pCi/L					
Barium-140	U	10.6	+/-29.9	50.0		pCi/L					
Beryllium-7	U	-21.4	+/-36.7	63.7		pCi/L					
Bismuth-212	U	14.3	+/-59.5	96.4		pCi/L					
Bismuth-214	U	5.08	+/-12.4	15.7		pCi/L					
Cerium-139	U	1.33	+/-3.39	6.17		pCi/L					
Cerium-141	U	8.13	+/-13.8	13.4		pCi/L					
Cerium-144	U	21.7	+/-24.7	46.1		pCi/L					
Cesium-134	U	1.41	+/-4.43	7.62		pCi/L					
Cesium-136	U	-7.69	+/-13.1	20.5		pCi/L					
Cesium-137	U	1.75	+/-4.38	8.15	10.0	pCi/L					
Chromium-51	U	42.2	+/-45.8	77.1		pCi/L					
Cobalt-56	U	-4.21	+/-4.85	8.23		pCi/L					
Cobalt-57	U	-0.813	+/-3.02	5.39		pCi/L					
Cobalt-58	U	3.23	+/-4.04	8.22		pCi/L					
Cobalt-60	U	1.77	+/-4.08	8.37		pCi/L					
Europium-152	U	2.76	+/-12.1	21.3		pCi/L					
Europium-154	U	13.3	+/-15.4	24.4		pCi/L					
Europium-155	U	-1.45	+/-12.6	21.2		pCi/L					
Iridium-192	UI	0.00	+/-4.37	7.76		pCi/L					
Iron-59	U	6.49	+/-9.77	17.7		pCi/L					
Lead-210	U	-72.4	+/-1090	1630		pCi/L					
Lead-212	UI	0.00	+/-13.5	16.7		pCi/L					
Lead-214	U	14.9	+/-15.2	18.0		pCi/L					
Manganese-54	U	1.32	+/-3.92	7.56		pCi/L					
Mercury-203	U	3.69	+/-4.58	8.42		pCi/L					
Neodymium-147	U	24.6	+/-61.2	113		pCi/L					
Neptunium-239	U	-11.1	+/-36.2	56.7		pCi/L					
Niobium-94	U	2.54	+/-3.61	6.96		pCi/L					
Niobium-95	U	-4.46	+/-5.14	7.37		pCi/L					
Potassium-40	U	30.8	+/-80.3	65.7		pCi/L					
Promethium-144	U	-3.65	+/-4.15	6.77		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371595005

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.71	+/-4.79	9.25	pCi/L
Radium-228	U	1.04	+/-24.7	33.7	pCi/L
Ruthenium-106	U	-13.3	+/-38.1	66.3	pCi/L
Silver-110m	U	1.88	+/-3.89	7.34	pCi/L
Sodium-22	U	4.70	+/-5.44	8.00	pCi/L
Thallium-208	U	1.43	+/-6.02	9.40	pCi/L
Thorium-230	U	-780	+/-1760	2770	pCi/L
Thorium-234	U	-85.9	+/-267	420	pCi/L
Tin-113	U	3.00	+/-4.93	9.44	pCi/L
Uranium-235	U	26.0	+/-44.2	42.6	pCi/L
Uranium-238	U	-85.9	+/-267	420	pCi/L
Yttrium-88	U	0.376	+/-5.28	10.2	pCi/L
Zinc-65	U	5.05	+/-8.22	15.1	pCi/L
Zirconium-95	U	0.625	+/-7.49	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.76	+/-1.47	2.89	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		140	+/-3.85	2.68	5.00	pCi/L					
Alpha	U	0.805	+/-1.86	3.21	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		146	+/-4.13	3.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	117	+/-129	216	300	pCi/L	MYM1	05/18/15	1247	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

Notes:

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID: WELL 13R  
Sample ID: 371595005

Project: WNUC00129  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 14  
Sample ID: 371595006  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:37  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-16.4	+/-18.9	29.9		pCi/L		MJH1	04/28/15	0956	1474077	1
Americium-241	U	8.70	+/-17.1	26.0		pCi/L						
Antimony-124	U	7.90	+/-10.7	22.4		pCi/L						
Antimony-125	U	-3.77	+/-8.69	15.0		pCi/L						
Barium-133	U	-2.94	+/-4.85	7.14		pCi/L						
Barium-140	U	-2.23	+/-23.4	41.4		pCi/L						
Beryllium-7	U	20.5	+/-32.6	61.1		pCi/L						
Bismuth-212	U	-14	+/-53.1	86.7		pCi/L						
Bismuth-214		19.3	+/-14.3	12.5		pCi/L						
Cerium-139	U	-2.14	+/-2.88	4.69		pCi/L						
Cerium-141	U	3.86	+/-7.71	10.1		pCi/L						
Cerium-144	U	0.320	+/-20.5	35.3		pCi/L						
Cesium-134	U	-2.05	+/-3.58	6.24		pCi/L						
Cesium-136	U	-0.887	+/-9.45	17.2		pCi/L						
Cesium-137	U	-0.333	+/-3.57	6.59	10.0	pCi/L						
Chromium-51	U	16.1	+/-34.2	63.7		pCi/L						
Cobalt-56	U	-1.24	+/-4.68	7.40		pCi/L						
Cobalt-57	U	-0.425	+/-2.52	4.33		pCi/L						
Cobalt-58	U	-3.57	+/-3.29	5.31		pCi/L						
Cobalt-60	U	0.058	+/-3.65	7.04		pCi/L						
Europium-152	U	-4.28	+/-9.07	15.8		pCi/L						
Europium-154	U	-2.06	+/-9.56	18.0		pCi/L						
Europium-155	U	-3.65	+/-12.0	18.2		pCi/L						
Iridium-192	U	-1.83	+/-3.25	5.62		pCi/L						
Iron-59	U	6.30	+/-6.64	14.2		pCi/L						
Lead-210	U	-199	+/-475	717		pCi/L						
Lead-212	U	7.59	+/-9.85	12.0		pCi/L						
Lead-214	U	10.0	+/-11.5	16.7		pCi/L						
Manganese-54	U	-2.25	+/-3.67	6.32		pCi/L						
Mercury-203	U	2.45	+/-3.40	6.45		pCi/L						
Neodymium-147	U	-18.8	+/-51.7	88.5		pCi/L						
Neptunium-239	U	-18.9	+/-26.5	44.1		pCi/L						
Niobium-94	U	1.70	+/-3.30	6.38		pCi/L						
Niobium-95	U	-0.451	+/-3.72	6.81		pCi/L						
Potassium-40	U	-15.1	+/-50.4	91.8		pCi/L						
Promethium-144	U	-1.3	+/-3.64	6.49		pCi/L						

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 14 Project: WNUC00129  
Sample ID: 371595006 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.47	+/-4.35	8.11	pCi/L
Radium-228	U	-16.4	+/-18.9	29.9	pCi/L
Ruthenium-106	U	11.2	+/-30.1	58.0	pCi/L
Silver-110m	U	2.12	+/-3.12	6.21	pCi/L
Sodium-22	U	-0.666	+/-3.38	6.38	pCi/L
Thallium-208	U	2.79	+/-5.23	7.66	pCi/L
Thorium-230	U	1140	+/-1770	1730	pCi/L
Thorium-234	U	51.2	+/-205	210	pCi/L
Tin-113	U	0.751	+/-4.07	7.44	pCi/L
Uranium-235	U	12.6	+/-25.2	32.0	pCi/L
Uranium-238	U	51.2	+/-205	210	pCi/L
Yttrium-88	U	-0.269	+/-3.94	7.60	pCi/L
Zinc-65	U	1.81	+/-8.71	16.2	pCi/L
Zirconium-95	U	6.60	+/-6.44	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.22	+/-0.924	1.73	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		8.20	+/-1.47	2.14	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.3	+/-123	217	300	pCi/L	MYM1	05/18/15	1303	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	371595007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:55		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.915	+/-19.8	30.5		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	-1.7	+/-30.5	49.1		pCi/L					
Antimony-124	U	-5.11	+/-12.8	22.0		pCi/L					
Antimony-125	U	2.59	+/-10.0	18.2		pCi/L					
Barium-133	U	-2.48	+/-5.18	7.71		pCi/L					
Barium-140	U	-0.151	+/-26.7	47.4		pCi/L					
Beryllium-7	U	16.2	+/-34.0	63.2		pCi/L					
Bismuth-212	U	-19.2	+/-59.9	106		pCi/L					
Bismuth-214	UI	0.00	+/-12.8	18.0		pCi/L					
Cerium-139	U	1.19	+/-3.27	5.74		pCi/L					
Cerium-141	U	-4.87	+/-7.81	12.0		pCi/L					
Cerium-144	U	9.30	+/-27.5	39.8		pCi/L					
Cesium-134	U	1.67	+/-4.67	8.41		pCi/L					
Cesium-136	U	-3.91	+/-10.9	19.9		pCi/L					
Cesium-137	U	-1.29	+/-3.62	6.49	10.0	pCi/L					
Chromium-51	U	3.50	+/-40.3	72.8		pCi/L					
Cobalt-56	U	-1.71	+/-4.40	7.69		pCi/L					
Cobalt-57	U	0.207	+/-2.99	5.23		pCi/L					
Cobalt-58	U	-1.39	+/-3.71	6.57		pCi/L					
Cobalt-60	U	-3.4	+/-4.40	7.40		pCi/L					
Europium-152	U	1.85	+/-10.5	19.1		pCi/L					
Europium-154	U	-6.08	+/-12.9	19.0		pCi/L					
Europium-155	U	-0.789	+/-12.3	21.6		pCi/L					
Iridium-192	U	0.525	+/-3.96	7.17		pCi/L					
Iron-59	U	3.00	+/-8.02	16.1		pCi/L					
Lead-210	U	76.9	+/-1100	2000		pCi/L					
Lead-212	U	7.30	+/-10.6	13.3		pCi/L					
Lead-214	U	16.1	+/-10.3	16.6		pCi/L					
Manganese-54	U	1.54	+/-4.27	7.18		pCi/L					
Mercury-203	U	-0.063	+/-4.07	7.34		pCi/L					
Neodymium-147	U	69.1	+/-59.1	116		pCi/L					
Neptunium-239	U	5.62	+/-32.0	56.3		pCi/L					
Niobium-94	U	-2.3	+/-3.74	6.45		pCi/L					
Niobium-95	U	3.30	+/-3.99	7.99		pCi/L					
Potassium-40	U	5.55	+/-65.1	81.0		pCi/L					
Promethium-144	U	3.82	+/-3.85	7.66		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	371595007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.492	+/-4.49	8.08	pCi/L
Radium-228	U	0.915	+/-19.8	30.5	pCi/L
Ruthenium-106	U	11.4	+/-34.2	65.2	pCi/L
Silver-110m	U	2.47	+/-3.84	7.00	pCi/L
Sodium-22	U	-2.04	+/-4.56	6.76	pCi/L
Thallium-208	U	1.84	+/-6.07	6.89	pCi/L
Thorium-230	U	1290	+/-1580	2840	pCi/L
Thorium-234	U	106	+/-322	364	pCi/L
Tin-113	U	1.67	+/-5.31	9.64	pCi/L
Uranium-235	U	-12	+/-28.4	40.6	pCi/L
Uranium-238	U	106	+/-322	364	pCi/L
Yttrium-88	U	1.65	+/-3.86	8.48	pCi/L
Zinc-65	U	0.669	+/-8.57	16.4	pCi/L
Zirconium-95	U	-0.271	+/-7.33	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.495	+/-1.35	1.91	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		165	+/-3.72	1.66	5.00	pCi/L					
Alpha		3.05	+/-1.64	2.55	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		171	+/-4.00	2.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	242	+/-135	218	300	pCi/L	MYM1	05/18/15	1320	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.1	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 15  
Sample ID: 371595007

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	371595008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:52		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-1.95	+/-13.9	24.5		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	6.29	+/-12.6	22.9		pCi/L					
Antimony-124	U	3.40	+/-8.85	18.0		pCi/L					
Antimony-125	U	2.59	+/-7.97	14.7		pCi/L					
Barium-133	U	4.10	+/-4.28	7.37		pCi/L					
Barium-140	U	7.38	+/-23.6	43.1		pCi/L					
Beryllium-7	U	19.3	+/-31.5	43.2		pCi/L					
Bismuth-212	U	-25.2	+/-44.4	78.3		pCi/L					
Bismuth-214	UI	0.00	+/-14.4	10.8		pCi/L					
Cerium-139	U	-3.41	+/-2.74	4.31		pCi/L					
Cerium-141	U	-1.55	+/-6.76	9.19		pCi/L					
Cerium-144	U	-2.36	+/-18.1	29.4		pCi/L					
Cesium-134	U	-4.03	+/-3.66	5.42		pCi/L					
Cesium-136	U	-5.92	+/-9.74	13.4		pCi/L					
Cesium-137	U	-1.68	+/-4.47	6.87	10.0	pCi/L					
Chromium-51	U	-5.33	+/-34.0	53.2		pCi/L					
Cobalt-56	U	3.40	+/-3.31	6.78		pCi/L					
Cobalt-57	U	-1.16	+/-2.33	3.91		pCi/L					
Cobalt-58	U	-0.266	+/-3.10	5.76		pCi/L					
Cobalt-60	U	1.78	+/-3.20	6.44		pCi/L					
Europium-152	U	-0.484	+/-8.30	14.9		pCi/L					
Europium-154	U	-1.35	+/-10.2	16.5		pCi/L					
Europium-155	U	-2.42	+/-9.23	15.8		pCi/L					
Iridium-192	U	2.59	+/-3.42	5.82		pCi/L					
Iron-59	U	3.64	+/-7.41	14.4		pCi/L					
Lead-210	U	46.4	+/-364	486		pCi/L					
Lead-212	U	5.49	+/-9.50	11.6		pCi/L					
Lead-214	U	5.41	+/-10.3	14.5		pCi/L					
Manganese-54	U	0.703	+/-3.32	6.24		pCi/L					
Mercury-203	U	-0.093	+/-3.41	6.14		pCi/L					
Neodymium-147	U	26.8	+/-48.8	90.9		pCi/L					
Neptunium-239	U	-9.16	+/-24.9	42.1		pCi/L					
Niobium-94	UI	0.00	+/-4.13	6.40		pCi/L					
Niobium-95	U	-1.39	+/-3.12	5.58		pCi/L					
Potassium-40	U	-16.5	+/-43.4	79.0		pCi/L					
Promethium-144	U	0.482	+/-4.16	4.77		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 16 Project: WNUC00129  
Sample ID: 371595008 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.77	+/-3.88	7.18	pCi/L
Radium-228	U	-1.95	+/-13.9	24.5	pCi/L
Ruthenium-106	U	12.4	+/-29.6	54.4	pCi/L
Silver-110m	U	-0.0269	+/-3.05	5.39	pCi/L
Sodium-22	U	-0.477	+/-3.58	5.81	pCi/L
Thallium-208	U	1.29	+/-5.73	6.11	pCi/L
Thorium-230	U	-502	+/-995	1550	pCi/L
Thorium-234	U	-46.4	+/-134	223	pCi/L
Tin-113	U	1.89	+/-4.09	7.56	pCi/L
Uranium-235	U	20.5	+/-24.4	29.3	pCi/L
Uranium-238	U	-46.4	+/-134	223	pCi/L
Yttrium-88	U	-2.62	+/-4.07	7.00	pCi/L
Zinc-65	U	2.46	+/-10.5	12.2	pCi/L
Zirconium-95	U	2.75	+/-5.62	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.16	+/-0.894	1.38	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		14.1	+/-1.33	1.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-83.2	+/-118	211	300	pCi/L	MYM1	05/18/15	1336	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	371595009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:01		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.39	+/-18.3	30.1		pCi/L		MJH1	04/28/15	0957 1474077	1
Americium-241	U	1.80	+/-32.6	44.9		pCi/L					
Antimony-124	U	-0.973	+/-7.88	15.5		pCi/L					
Antimony-125	U	-4.81	+/-9.84	16.8		pCi/L					
Barium-133	U	0.431	+/-4.67	7.47		pCi/L					
Barium-140	U	4.03	+/-27.2	49.0		pCi/L					
Beryllium-7	U	-5.0	+/-35.8	62.7		pCi/L					
Bismuth-212	U	37.1	+/-48.0	96.9		pCi/L					
Bismuth-214	UI	0.00	+/-10.9	18.5		pCi/L					
Cerium-139	U	0.278	+/-3.50	5.96		pCi/L					
Cerium-141	U	-5.98	+/-9.35	11.9		pCi/L					
Cerium-144	U	-22.7	+/-21.2	33.9		pCi/L					
Cesium-134	U	1.54	+/-3.96	7.69		pCi/L					
Cesium-136	U	7.87	+/-9.97	20.0		pCi/L					
Cesium-137	U	1.09	+/-3.44	6.67	10.0	pCi/L					
Chromium-51	U	10.3	+/-38.2	70.1		pCi/L					
Cobalt-56	U	-2.83	+/-4.83	7.00		pCi/L					
Cobalt-57	U	0.386	+/-3.05	5.28		pCi/L					
Cobalt-58	U	-2.44	+/-3.48	5.95		pCi/L					
Cobalt-60	U	2.92	+/-3.61	7.89		pCi/L					
Europium-152	U	-7.5	+/-10.9	18.4		pCi/L					
Europium-154	U	-1.7	+/-10.2	19.6		pCi/L					
Europium-155	U	6.17	+/-11.9	21.4		pCi/L					
Iridium-192	U	0.307	+/-3.70	6.69		pCi/L					
Iron-59	U	2.74	+/-7.27	13.2		pCi/L					
Lead-210	U	319	+/-1060	1940		pCi/L					
Lead-212	U	6.98	+/-8.71	12.3		pCi/L					
Lead-214	U	8.50	+/-13.1	16.9		pCi/L					
Manganese-54	U	0.399	+/-3.62	6.80		pCi/L					
Mercury-203	U	3.70	+/-3.99	7.61		pCi/L					
Neodymium-147	U	-0.757	+/-54.3	96.7		pCi/L					
Neptunium-239	U	-9.18	+/-30.6	51.8		pCi/L					
Niobium-94	U	0.850	+/-3.26	6.24		pCi/L					
Niobium-95	U	1.24	+/-3.81	7.21		pCi/L					
Potassium-40	U	32.6	+/-64.9	82.4		pCi/L					
Promethium-144	U	-0.569	+/-3.81	6.94		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 17 Project: WNUC00129  
Sample ID: 371595009 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.954	+/-3.81	6.70	pCi/L
Radium-228	U	-2.39	+/-18.3	30.1	pCi/L
Ruthenium-106	U	6.18	+/-29.7	57.0	pCi/L
Silver-110m	U	0.279	+/-3.20	6.08	pCi/L
Sodium-22	U	-0.399	+/-3.64	7.02	pCi/L
Thallium-208	U	1.79	+/-3.70	6.90	pCi/L
Thorium-230	U	1910	+/-2620	2680	pCi/L
Thorium-234	U	-48.4	+/-261	412	pCi/L
Tin-113	U	-2.66	+/-5.71	8.93	pCi/L
Uranium-235	U	-15.6	+/-32.5	39.3	pCi/L
Uranium-238	U	-48.4	+/-261	412	pCi/L
Yttrium-88	U	0.390	+/-3.74	7.69	pCi/L
Zinc-65	U	-10.2	+/-7.93	11.7	pCi/L
Zirconium-95	U	-3.87	+/-6.93	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.738	+/-1.08	1.81	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		505	+/-6.47	2.27	5.00	pCi/L					
Alpha	U	0.760	+/-1.08	1.71	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		516	+/-6.46	1.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	789	+/-151	212	300	pCi/L	MYM1	05/18/15	1353	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.1	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 371595009

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 371595010  
Matrix: Ground Water  
Collect Date: 13-APR-15 10:17  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.249	+/-17.7	29.2		pCi/L		MJH1	04/29/15	0634 1474077	1
Americium-241	U	-6.11	+/-21.2	33.0		pCi/L					
Antimony-124	U	-0.786	+/-9.72	18.7		pCi/L					
Antimony-125	U	0.168	+/-10.5	18.9		pCi/L					
Barium-133	U	-5.77	+/-5.39	9.11		pCi/L					
Barium-140	U	-23	+/-33.9	57.4		pCi/L					
Beryllium-7	U	28.1	+/-55.0	65.3		pCi/L					
Bismuth-212	U	51.7	+/-72.1	112		pCi/L					
Bismuth-214	U	12.6	+/-11.6	15.8		pCi/L					
Cerium-139	U	-1.17	+/-3.68	6.30		pCi/L					
Cerium-141	U	-0.609	+/-8.43	12.8		pCi/L					
Cerium-144	U	-5.25	+/-24.6	42.6		pCi/L					
Cesium-134	U	-0.436	+/-4.41	7.93		pCi/L					
Cesium-136	U	9.64	+/-10.5	21.5		pCi/L					
Cesium-137	U	3.27	+/-4.56	8.51	10.0	pCi/L					
Chromium-51	U	-35	+/-50.7	85.4		pCi/L					
Cobalt-56	U	-1.49	+/-5.08	9.07		pCi/L					
Cobalt-57	U	2.31	+/-3.15	5.69		pCi/L					
Cobalt-58	U	-0.222	+/-4.84	8.86		pCi/L					
Cobalt-60	U	-0.0608	+/-3.67	6.87		pCi/L					
Europium-152	U	3.67	+/-12.1	22.1		pCi/L					
Europium-154	U	2.03	+/-13.4	21.8		pCi/L					
Europium-155	U	-0.152	+/-13.4	23.5		pCi/L					
Iridium-192	U	2.36	+/-4.53	8.34		pCi/L					
Iron-59	U	-3.36	+/-8.89	13.9		pCi/L					
Lead-210	U	-491	+/-619	823		pCi/L					
Lead-212	U	5.31	+/-11.1	13.4		pCi/L					
Lead-214	U	0.597	+/-11.4	17.4		pCi/L					
Manganese-54	U	0.818	+/-4.12	7.71		pCi/L					
Mercury-203	U	1.56	+/-9.45	8.25		pCi/L					
Neodymium-147	U	-12.6	+/-71.5	126		pCi/L					
Neptunium-239	U	-38.3	+/-33.4	55.7		pCi/L					
Niobium-94	U	-0.983	+/-4.14	7.14		pCi/L					
Niobium-95	U	-0.777	+/-5.11	8.86		pCi/L					
Potassium-40	U	-19.5	+/-53.1	89.2		pCi/L					
Promethium-144	U	2.50	+/-4.15	7.67		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18 Project: WNUC00129  
Sample ID: 371595010 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	5.08	+/-5.05	9.62	pCi/L
Radium-228	U	0.249	+/-17.7	29.2	pCi/L
Ruthenium-106	U	1.89	+/-38.7	68.8	pCi/L
Silver-110m	U	-4.34	+/-4.97	6.79	pCi/L
Sodium-22	U	1.79	+/-4.52	7.74	pCi/L
Thallium-208	U	6.68	+/-8.57	7.44	pCi/L
Thorium-230	U	-385	+/-1540	2380	pCi/L
Thorium-234	U	132	+/-298	284	pCi/L
Tin-113	U	-4.78	+/-5.75	9.79	pCi/L
Uranium-235	U	-1.69	+/-30.3	42.4	pCi/L
Uranium-238	U	132	+/-298	284	pCi/L
Yttrium-88	U	-2.25	+/-3.64	6.38	pCi/L
Zinc-65	U	5.35	+/-8.05	16.0	pCi/L
Zirconium-95	U	-3.74	+/-9.07	15.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		9.41	+/-6.09	8.77	5.00	pCi/L	KXB2	05/15/15	1325	1475946	2
Beta		179	+/-8.49	7.78	5.00	pCi/L					
Alpha	U	11.7	+/-8.39	13.4	5.00	pCi/L	KXB2	05/18/15	1815	1475946	3
Beta		153	+/-7.85	7.16	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	93.1	+/-122	206	300	pCi/L	MYM1	05/18/15	1410	1475754	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			100	(15%-125%)

Notes:



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 371595010

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	371595011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 10:05		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.24	+/-14.8	23.6		pCi/L		MJH1	04/29/15	0710 1474077	1
Americium-241	U	6.25	+/-11.5	18.4		pCi/L					
Antimony-124	U	8.18	+/-7.80	14.6		pCi/L					
Antimony-125	U	-2.14	+/-8.19	14.1		pCi/L					
Barium-133	U	2.07	+/-4.04	7.25		pCi/L					
Barium-140	U	6.21	+/-19.3	36.9		pCi/L					
Beryllium-7	U	30.2	+/-29.3	57.8		pCi/L					
Bismuth-212	U	-0.192	+/-40.9	75.3		pCi/L					
Bismuth-214	UI	0.00	+/-13.1	11.3		pCi/L					
Cerium-139	U	-2.08	+/-3.18	4.75		pCi/L					
Cerium-141	U	0.982	+/-5.33	9.63		pCi/L					
Cerium-144	U	-4.23	+/-17.2	30.6		pCi/L					
Cesium-134	U	-0.0997	+/-3.30	6.05		pCi/L					
Cesium-136	U	0.352	+/-7.71	14.2		pCi/L					
Cesium-137	U	0.873	+/-2.80	5.37	10.0	pCi/L					
Chromium-51	U	0.503	+/-31.0	54.9		pCi/L					
Cobalt-56	U	-2.33	+/-4.03	6.26		pCi/L					
Cobalt-57	U	-0.00738	+/-2.14	3.87		pCi/L					
Cobalt-58	U	5.02	+/-8.48	6.20		pCi/L					
Cobalt-60	U	-0.85	+/-3.54	6.52		pCi/L					
Europium-152	U	-6.71	+/-10.2	17.1		pCi/L					
Europium-154	U	2.22	+/-8.65	17.3		pCi/L					
Europium-155	U	6.55	+/-8.48	16.0		pCi/L					
Iridium-192	U	-0.627	+/-2.86	4.98		pCi/L					
Iron-59	U	1.79	+/-6.22	12.0		pCi/L					
Lead-210	U	311	+/-380	353		pCi/L					
Lead-212	U	5.47	+/-9.69	9.09		pCi/L					
Lead-214		14.7	+/-10.5	12.5		pCi/L					
Manganese-54	U	-1.43	+/-3.12	5.41		pCi/L					
Mercury-203	U	-0.937	+/-3.44	5.96		pCi/L					
Neodymium-147	U	22.2	+/-39.7	77.3		pCi/L					
Neptunium-239	U	-10.2	+/-23.2	40.9		pCi/L					
Niobium-94	U	-1.99	+/-3.57	5.23		pCi/L					
Niobium-95	U	0.273	+/-3.30	6.10		pCi/L					
Potassium-40	U	-2.04	+/-40.3	74.0		pCi/L					
Promethium-144	U	0.891	+/-3.61	5.87		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	371595011	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.91	+/-4.18	6.96	pCi/L
Radium-228	U	-9.24	+/-14.8	23.6	pCi/L
Ruthenium-106	U	18.2	+/-25.9	50.9	pCi/L
Silver-110m	U	-1.45	+/-2.59	4.53	pCi/L
Sodium-22	U	1.08	+/-3.02	6.12	pCi/L
Thallium-208	U	0.641	+/-3.56	6.15	pCi/L
Thorium-230	U	542	+/-1420	1430	pCi/L
Thorium-234	U	123	+/-173	217	pCi/L
Tin-113	U	-0.667	+/-4.14	7.16	pCi/L
Uranium-235	U	-20.8	+/-20.9	31.8	pCi/L
Uranium-238	U	123	+/-173	217	pCi/L
Yttrium-88	U	0.400	+/-3.40	6.77	pCi/L
Zinc-65	U	-1.45	+/-7.56	13.3	pCi/L
Zirconium-95	U	0.332	+/-5.25	9.81	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.0909	+/-1.84	4.20	5.00	pCi/L	KXB2	05/19/15	1058	1475946	2
Beta	U	2.04	+/-2.43	4.08	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-67.1	+/-116	208	300	pCi/L	MYM1	05/18/15	1426	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	371595012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:58		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	11.4	+/-19.8	25.0		pCi/L		MJH1	04/29/15	0832 1474077	1
Americium-241	U	-8.66	+/-38.4	55.9		pCi/L					
Antimony-124	U	9.18	+/-10.7	22.9		pCi/L					
Antimony-125	U	-1.54	+/-10.9	19.1		pCi/L					
Barium-133	UI	0.00	+/-12.2	8.89		pCi/L					
Barium-140	U	-1.44	+/-32.9	58.3		pCi/L					
Beryllium-7	U	5.61	+/-38.5	69.3		pCi/L					
Bismuth-212	U	25.5	+/-67.1	108		pCi/L					
Bismuth-214	U	6.07	+/-13.2	13.7		pCi/L					
Cerium-139	U	-0.40	+/-3.50	6.18		pCi/L					
Cerium-141	U	-8.54	+/-8.90	13.2		pCi/L					
Cerium-144	U	-14.8	+/-24.0	41.4		pCi/L					
Cesium-134	U	2.16	+/-4.42	8.29		pCi/L					
Cesium-136	U	6.80	+/-10.6	21.4		pCi/L					
Cesium-137	U	-2.56	+/-3.85	6.42	10.0	pCi/L					
Chromium-51	U	-33.4	+/-47.4	80.2		pCi/L					
Cobalt-56	U	1.20	+/-3.85	7.48		pCi/L					
Cobalt-57	U	-0.846	+/-4.13	5.55		pCi/L					
Cobalt-58	U	-0.204	+/-4.31	7.68		pCi/L					
Cobalt-60	U	-0.277	+/-4.05	7.61		pCi/L					
Europium-152	U	1.94	+/-12.6	20.5		pCi/L					
Europium-154	U	0.424	+/-11.5	21.8		pCi/L					
Europium-155	U	2.43	+/-14.8	24.3		pCi/L					
Iridium-192	U	0.257	+/-4.76	7.56		pCi/L					
Iron-59	UI	0.00	+/-13.5	17.1		pCi/L					
Lead-210	U	-1380	+/-1310	1920		pCi/L					
Lead-212	U	-7.69	+/-9.72	13.4		pCi/L					
Lead-214	U	4.41	+/-10.7	17.2		pCi/L					
Manganese-54	U	-2.28	+/-3.70	6.50		pCi/L					
Mercury-203	U	1.56	+/-4.41	7.98		pCi/L					
Neodymium-147	U	-41.6	+/-65.8	111		pCi/L					
Neptunium-239	U	3.91	+/-34.9	62.4		pCi/L					
Niobium-94	U	-0.0113	+/-3.91	6.94		pCi/L					
Niobium-95	U	2.20	+/-4.41	8.27		pCi/L					
Potassium-40	U	-50.4	+/-56.6	99.5		pCi/L					
Promethium-144	U	-4.34	+/-4.31	6.92		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	371595012	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.16	+/-5.36	9.28	pCi/L
Radium-228	U	11.4	+/-19.8	25.0	pCi/L
Ruthenium-106	U	-7.39	+/-34.4	60.2	pCi/L
Silver-110m	U	-0.436	+/-3.68	6.51	pCi/L
Sodium-22	U	-0.229	+/-4.08	7.66	pCi/L
Thallium-208	U	-4.3	+/-5.90	8.22	pCi/L
Thorium-230	U	2660	+/-2890	3540	pCi/L
Thorium-234	U	4.48	+/-342	405	pCi/L
Tin-113	U	3.98	+/-5.21	9.74	pCi/L
Uranium-235	U	-22.4	+/-28.0	42.0	pCi/L
Uranium-238	U	4.48	+/-342	405	pCi/L
Yttrium-88	U	2.38	+/-4.73	9.83	pCi/L
Zinc-65	U	-7.84	+/-8.56	14.4	pCi/L
Zirconium-95	U	3.80	+/-8.38	15.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.10	+/-3.49	4.97	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta		37.4	+/-4.43	4.59	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.10	+/-121	211	300	pCi/L	MYM1	05/18/15	1443	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371595013  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:13  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.682	+/-17.2	30.2		pCi/L		MJH1	04/29/15	0846 1474077	1
Americium-241	U	-31.6	+/-25.6	38.9		pCi/L					
Antimony-124	U	3.32	+/-10.2	20.3		pCi/L					
Antimony-125	U	-5.76	+/-10.8	18.2		pCi/L					
Barium-133	U	-9.91	+/-5.20	8.06		pCi/L					
Barium-140	U	21.5	+/-31.7	53.3		pCi/L					
Beryllium-7	U	-3.29	+/-40.8	70.7		pCi/L					
Bismuth-212	U	-6.66	+/-55.3	98.3		pCi/L					
Bismuth-214	U	0.331	+/-10.5	17.9		pCi/L					
Cerium-139	U	3.71	+/-4.06	6.65		pCi/L					
Cerium-141	U	0.150	+/-10.6	12.7		pCi/L					
Cerium-144	U	-14.2	+/-29.5	43.0		pCi/L					
Cesium-134	U	-3.92	+/-5.02	7.52		pCi/L					
Cesium-136	U	-1.36	+/-11.1	20.2		pCi/L					
Cesium-137	U	3.90	+/-4.19	8.08	10.0	pCi/L					
Chromium-51	U	-16.3	+/-45.4	78.4		pCi/L					
Cobalt-56	U	3.88	+/-5.07	9.52		pCi/L					
Cobalt-57	U	1.17	+/-3.18	5.63		pCi/L					
Cobalt-58	U	-1.51	+/-4.23	7.33		pCi/L					
Cobalt-60	U	2.93	+/-4.51	8.52		pCi/L					
Europium-152	U	0.192	+/-12.1	21.4		pCi/L					
Europium-154	U	8.66	+/-10.4	21.4		pCi/L					
Europium-155	U	-7.87	+/-13.3	22.7		pCi/L					
Iridium-192	U	-2.42	+/-4.34	7.42		pCi/L					
Iron-59	U	-3.27	+/-9.28	16.4		pCi/L					
Lead-210	U	-204	+/-639	975		pCi/L					
Lead-212	U	7.62	+/-11.6	13.5		pCi/L					
Lead-214	U	8.84	+/-10.4	17.8		pCi/L					
Manganese-54	U	-0.17	+/-4.19	7.44		pCi/L					
Mercury-203	U	-3.94	+/-5.32	7.84		pCi/L					
Neodymium-147	U	-92.8	+/-66.8	100		pCi/L					
Neptunium-239	U	-36	+/-33.5	55.7		pCi/L					
Niobium-94	U	1.09	+/-4.25	7.69		pCi/L					
Niobium-95	U	1.46	+/-4.32	7.99		pCi/L					
Potassium-40	U	3.68	+/-50.2	97.7		pCi/L					
Promethium-144	U	0.645	+/-4.29	7.71		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371595013

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.801	+/-5.93	8.99	pCi/L
Radium-228	U	-0.682	+/-17.2	30.2	pCi/L
Ruthenium-106	U	-18.9	+/-36.2	62.5	pCi/L
Silver-110m	U	-2.4	+/-4.15	7.10	pCi/L
Sodium-22	U	2.76	+/-3.71	7.56	pCi/L
Thallium-208	U	4.97	+/-6.40	6.69	pCi/L
Thorium-230	U	-1270	+/-1510	2580	pCi/L
Thorium-234	U	-31.7	+/-219	344	pCi/L
Tin-113	U	6.42	+/-5.45	10.3	pCi/L
Uranium-235	U	0.480	+/-34.0	38.7	pCi/L
Uranium-238	U	-31.7	+/-219	344	pCi/L
Yttrium-88	U	3.26	+/-4.17	9.02	pCi/L
Zinc-65	U	4.81	+/-10.3	18.2	pCi/L
Zirconium-95	U	2.87	+/-7.63	14.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.18	+/-2.27	4.21	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta	U	0.462	+/-2.07	3.84	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-66.6	+/-119	213	300	pCi/L	MYM1	05/18/15	1459	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371595014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 08:26		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	8.58	+/-17.5	25.4		pCi/L		MJH1	04/29/15	0833	1474077	1
Americium-241	UI	0.00	+/-17.8	16.6		pCi/L						
Antimony-124	U	1.21	+/-8.04	15.6		pCi/L						
Antimony-125	U	2.58	+/-8.30	15.0		pCi/L						
Barium-133	U	3.15	+/-5.36	8.21		pCi/L						
Barium-140	U	20.4	+/-25.2	48.8		pCi/L						
Beryllium-7	U	-3.08	+/-31.2	54.1		pCi/L						
Bismuth-212	U	-23.5	+/-51.3	81.1		pCi/L						
Bismuth-214	U	8.39	+/-12.3	15.6		pCi/L						
Cerium-139	U	-1.57	+/-2.79	4.57		pCi/L						
Cerium-141	U	-1.83	+/-7.34	10.2		pCi/L						
Cerium-144	U	-2.14	+/-17.3	29.5		pCi/L						
Cesium-134	U	1.04	+/-3.36	6.00		pCi/L						
Cesium-136	U	-5.61	+/-8.87	14.8		pCi/L						
Cesium-137	U	0.0256	+/-3.25	5.94	10.0	pCi/L						
Chromium-51	U	-16.3	+/-44.1	62.8		pCi/L						
Cobalt-56	U	-1.05	+/-3.56	6.25		pCi/L						
Cobalt-57	U	-0.129	+/-2.30	3.94		pCi/L						
Cobalt-58	U	-2.33	+/-3.93	6.27		pCi/L						
Cobalt-60	U	-1.35	+/-3.51	6.25		pCi/L						
Europium-152	U	7.86	+/-9.06	16.9		pCi/L						
Europium-154	U	-2.11	+/-9.23	16.9		pCi/L						
Europium-155	U	-0.376	+/-9.28	16.0		pCi/L						
Iridium-192	U	-2.18	+/-3.30	5.62		pCi/L						
Iron-59	U	-1.76	+/-6.64	11.9		pCi/L						
Lead-210	U	187	+/-325	296		pCi/L						
Lead-212	U	5.41	+/-8.40	9.56		pCi/L						
Lead-214		17.5	+/-11.1	14.8		pCi/L						
Manganese-54	U	-0.222	+/-3.10	5.58		pCi/L						
Mercury-203	U	0.937	+/-3.56	6.43		pCi/L						
Neodymium-147	U	-16.8	+/-53.5	90.7		pCi/L						
Neptunium-239	U	-4.49	+/-24.4	41.6		pCi/L						
Niobium-94	U	3.42	+/-2.83	5.66		pCi/L						
Niobium-95	U	1.75	+/-3.89	6.72		pCi/L						
Potassium-40	U	11.6	+/-70.6	72.1		pCi/L						
Promethium-144	U	-0.129	+/-3.06	5.55		pCi/L						



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371595014	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0456	+/-4.08	7.13	pCi/L
Radium-228	U	8.58	+/-17.5	25.4	pCi/L
Ruthenium-106	U	6.33	+/-31.4	57.9	pCi/L
Silver-110m	U	-1.25	+/-2.97	5.24	pCi/L
Sodium-22	U	-0.70	+/-3.26	5.98	pCi/L
Thallium-208	U	2.64	+/-4.51	5.45	pCi/L
Thorium-230	U	-379	+/-856	1330	pCi/L
Thorium-234	U	69.0	+/-149	192	pCi/L
Tin-113	U	-4.34	+/-4.19	6.84	pCi/L
Uranium-235	U	-2.15	+/-23.5	33.1	pCi/L
Uranium-238	U	69.0	+/-149	192	pCi/L
Yttrium-88	U	1.50	+/-4.83	8.44	pCi/L
Zinc-65	U	-11.7	+/-6.82	10.3	pCi/L
Zirconium-95	U	-0.954	+/-6.26	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.763	+/-1.78	3.34	5.00	pCi/L	KXB2	05/19/15	1057	1475946	2
Beta		13.0	+/-3.58	4.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-118	+/-118	215	300	pCi/L	MYM1	05/18/15	1516	1475754	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 26  
Sample ID: 371595015  
Matrix: Ground Water  
Collect Date: 09-APR-15 10:57  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	5.99	+/-20.7	27.4		pCi/L		MJH1	04/29/15	0834 1474077	1
Americium-241	U	3.47	+/-17.6	28.1		pCi/L					
Antimony-124	U	-0.684	+/-8.16	15.9		pCi/L					
Antimony-125	U	5.78	+/-12.1	15.1		pCi/L					
Barium-133	U	-0.373	+/-4.18	6.57		pCi/L					
Barium-140	U	7.78	+/-31.7	57.8		pCi/L					
Beryllium-7	U	8.35	+/-33.9	61.4		pCi/L					
Bismuth-212	U	33.7	+/-46.9	88.1		pCi/L					
Bismuth-214	U	-1.72	+/-8.96	14.0		pCi/L					
Cerium-139	U	-2.96	+/-3.30	5.35		pCi/L					
Cerium-141	U	0.821	+/-8.73	12.2		pCi/L					
Cerium-144	U	-13.6	+/-20.8	34.4		pCi/L					
Cesium-134	U	-0.486	+/-3.53	6.49		pCi/L					
Cesium-136	U	-0.65	+/-11.0	20.4		pCi/L					
Cesium-137	U	0.754	+/-3.07	5.60	10.0	pCi/L					
Chromium-51	U	-34.7	+/-46.1	68.3		pCi/L					
Cobalt-56	U	-0.838	+/-3.66	6.67		pCi/L					
Cobalt-57	U	-1.02	+/-2.72	4.59		pCi/L					
Cobalt-58	U	-1.03	+/-3.25	5.91		pCi/L					
Cobalt-60	U	3.39	+/-2.03	5.91		pCi/L					
Europium-152	U	-1.82	+/-8.83	15.7		pCi/L					
Europium-154	U	-3.92	+/-8.72	15.3		pCi/L					
Europium-155	U	1.79	+/-10.8	18.9		pCi/L					
Iridium-192	U	2.43	+/-4.40	6.61		pCi/L					
Iron-59	U	0.294	+/-7.01	13.2		pCi/L					
Lead-210	U	241	+/-632	760		pCi/L					
Lead-212	U	10.7	+/-10.6	11.7		pCi/L					
Lead-214	UI	0.00	+/-13.6	13.9		pCi/L					
Manganese-54	U	0.295	+/-2.86	5.41		pCi/L					
Mercury-203	U	4.05	+/-4.72	6.22		pCi/L					
Neodymium-147	U	-3.42	+/-67.9	121		pCi/L					
Neptunium-239	U	16.2	+/-28.0	49.5		pCi/L					
Niobium-94	U	2.69	+/-3.02	5.76		pCi/L					
Niobium-95	U	2.20	+/-3.51	6.91		pCi/L					
Potassium-40	U	-42.5	+/-44.3	82.0		pCi/L					
Promethium-144	U	1.35	+/-3.24	5.92		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 26 Project: WNUC00129  
Sample ID: 371595015 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.627	+/-3.94	6.96	pCi/L
Radium-228	U	5.99	+/-20.7	27.4	pCi/L
Ruthenium-106	U	1.91	+/-30.2	53.7	pCi/L
Silver-110m	U	0.583	+/-4.09	5.47	pCi/L
Sodium-22	U	-1.47	+/-3.07	5.38	pCi/L
Thallium-208	U	-1.38	+/-4.29	6.80	pCi/L
Thorium-230	U	615	+/-1390	1750	pCi/L
Thorium-234	U	21.3	+/-224	289	pCi/L
Tin-113	U	-0.278	+/-4.38	7.82	pCi/L
Uranium-235	U	5.23	+/-26.6	36.0	pCi/L
Uranium-238	U	21.3	+/-224	289	pCi/L
Yttrium-88	U	1.21	+/-3.17	6.78	pCi/L
Zinc-65	U	-4.94	+/-7.59	13.0	pCi/L
Zirconium-95	U	1.96	+/-6.47	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.569	+/-2.29	4.57	5.00	pCi/L	KXB2	05/19/15	1100	1475946	2
Beta	U	-0.492	+/-2.36	4.57	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	38.7	+/-98.8	170	300	pCi/L	MYM1	05/18/15	1012	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	371595016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.06	+/-15.9	28.7		pCi/L		MJH1	04/29/15	0834 1474077	1
Americium-241	U	4.21	+/-14.5	23.5		pCi/L					
Antimony-124	U	4.07	+/-7.81	16.5		pCi/L					
Antimony-125	U	-0.418	+/-8.21	14.6		pCi/L					
Barium-133	U	3.77	+/-3.96	6.89		pCi/L					
Barium-140	U	-16	+/-22.6	37.5		pCi/L					
Beryllium-7	U	28.1	+/-27.4	53.3		pCi/L					
Bismuth-212	U	42.1	+/-43.1	74.4		pCi/L					
Bismuth-214		13.3	+/-11.2	11.3		pCi/L					
Cerium-139	U	-1.04	+/-2.77	4.62		pCi/L					
Cerium-141	U	-4.81	+/-6.16	8.77		pCi/L					
Cerium-144	U	-4.37	+/-18.7	31.7		pCi/L					
Cesium-134	U	-3.25	+/-4.07	6.43		pCi/L					
Cesium-136	U	-2.51	+/-9.38	13.3		pCi/L					
Cesium-137	U	-2.4	+/-4.44	6.70	10.0	pCi/L					
Chromium-51	U	-18.7	+/-32.1	55.6		pCi/L					
Cobalt-56	U	-1.52	+/-3.87	5.87		pCi/L					
Cobalt-57	U	1.22	+/-2.38	4.23		pCi/L					
Cobalt-58	U	-0.608	+/-3.17	5.80		pCi/L					
Cobalt-60	U	-2.33	+/-3.39	5.62		pCi/L					
Europium-152	U	4.35	+/-9.30	17.2		pCi/L					
Europium-154	U	-1.33	+/-10.2	16.5		pCi/L					
Europium-155	U	0.490	+/-9.56	16.7		pCi/L					
Iridium-192	U	1.53	+/-3.21	5.94		pCi/L					
Iron-59	U	-0.946	+/-6.11	11.2		pCi/L					
Lead-210	U	-206	+/-293	434		pCi/L					
Lead-212	U	0.337	+/-8.34	10.1		pCi/L					
Lead-214	U	12.1	+/-12.0	15.7		pCi/L					
Manganese-54	U	2.86	+/-2.94	6.00		pCi/L					
Mercury-203	U	3.00	+/-3.20	6.11		pCi/L					
Neodymium-147	U	-39	+/-43.5	70.8		pCi/L					
Neptunium-239	U	30.9	+/-25.4	46.6		pCi/L					
Niobium-94	U	2.19	+/-2.95	5.59		pCi/L					
Niobium-95	U	0.966	+/-3.57	6.76		pCi/L					
Potassium-40	U	-13.9	+/-47.4	86.6		pCi/L					
Promethium-144	U	-0.903	+/-3.15	5.70		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 27 Project: WNUC00129  
Sample ID: 371595016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.24	+/-4.11	7.75	pCi/L
Radium-228	U	3.06	+/-15.9	28.7	pCi/L
Ruthenium-106	U	4.99	+/-31.9	50.4	pCi/L
Silver-110m	U	-2.88	+/-3.18	5.06	pCi/L
Sodium-22	U	-0.367	+/-3.60	5.86	pCi/L
Thallium-208	U	0.470	+/-4.89	4.80	pCi/L
Thorium-230	U	-380	+/-1040	1570	pCi/L
Thorium-234	U	6.61	+/-200	190	pCi/L
Tin-113	U	-0.693	+/-4.12	7.28	pCi/L
Uranium-235	U	-0.067	+/-20.7	31.3	pCi/L
Uranium-238	U	6.61	+/-200	190	pCi/L
Yttrium-88	U	-3.41	+/-3.90	6.39	pCi/L
Zinc-65	U	-5.89	+/-7.17	11.9	pCi/L
Zirconium-95	U	2.79	+/-6.26	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.42	+/-3.16	4.78	5.00	pCi/L	KXB2	05/19/15	1058	1475946	2
Beta		16.1	+/-3.83	3.88	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	16.9	+/-97.6	170	300	pCi/L	MYM1	05/18/15	1029	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 28  
Sample ID: 371595017  
Matrix: Ground Water  
Collect Date: 13-APR-15 10:40  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-8.01	+/-16.0	25.5		pCi/L		MJH1	04/29/15	0846 1474077	1
Americium-241	U	1.05	+/-16.4	26.2		pCi/L					
Antimony-124	U	4.82	+/-9.21	19.0		pCi/L					
Antimony-125	U	13.6	+/-11.6	14.6		pCi/L					
Barium-133	U	-5.76	+/-4.40	7.09		pCi/L					
Barium-140	U	-8.96	+/-24.7	42.0		pCi/L					
Beryllium-7	U	16.6	+/-30.7	57.0		pCi/L					
Bismuth-212	U	61.8	+/-48.7	98.8		pCi/L					
Bismuth-214	U	1.62	+/-13.1	15.7		pCi/L					
Cerium-139	U	-2.21	+/-3.18	5.19		pCi/L					
Cerium-141	U	-4.64	+/-7.74	11.1		pCi/L					
Cerium-144	U	-14.3	+/-21.1	34.8		pCi/L					
Cesium-134	U	0.028	+/-4.09	6.53		pCi/L					
Cesium-136	U	-0.461	+/-10.2	18.4		pCi/L					
Cesium-137	U	-0.864	+/-4.62	8.19	10.0	pCi/L					
Chromium-51	U	-33.7	+/-39.4	66.3		pCi/L					
Cobalt-56	U	0.598	+/-4.09	7.52		pCi/L					
Cobalt-57	U	-3.4	+/-2.57	4.09		pCi/L					
Cobalt-58	U	-2.59	+/-3.08	5.12		pCi/L					
Cobalt-60	U	-3.12	+/-3.50	5.80		pCi/L					
Europium-152	U	-4.4	+/-10.0	17.3		pCi/L					
Europium-154	U	-2.35	+/-9.51	17.6		pCi/L					
Europium-155	U	8.64	+/-10.2	18.5		pCi/L					
Iridium-192	U	1.42	+/-3.49	6.39		pCi/L					
Iron-59	U	2.19	+/-7.39	14.6		pCi/L					
Lead-210	U	78.7	+/-536	561		pCi/L					
Lead-212	U	-2.83	+/-7.73	11.7		pCi/L					
Lead-214	U	-9.25	+/-9.66	14.3		pCi/L					
Manganese-54	U	-2.62	+/-3.31	5.54		pCi/L					
Mercury-203	U	0.466	+/-4.11	6.55		pCi/L					
Neodymium-147	U	34.1	+/-54.3	102		pCi/L					
Neptunium-239	U	-18.4	+/-30.6	45.0		pCi/L					
Niobium-94	U	-0.777	+/-3.31	5.92		pCi/L					
Niobium-95	U	4.94	+/-4.06	7.57		pCi/L					
Potassium-40	U	1.81	+/-52.0	92.2		pCi/L					
Promethium-144	U	1.24	+/-3.49	6.55		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	371595017	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.10	+/-4.67	7.77	pCi/L
Radium-228	U	-8.01	+/-16.0	25.5	pCi/L
Ruthenium-106	U	-10.9	+/-28.8	51.5	pCi/L
Silver-110m	U	-6.06	+/-3.73	5.88	pCi/L
Sodium-22	U	-0.579	+/-3.32	6.20	pCi/L
Thallium-208	U	0.445	+/-5.19	5.80	pCi/L
Thorium-230	UI	0.00	+/-1330	1600	pCi/L
Thorium-234	U	116	+/-157	273	pCi/L
Tin-113	U	0.483	+/-4.10	7.39	pCi/L
Uranium-235	U	-11	+/-25.7	35.5	pCi/L
Uranium-238	U	116	+/-157	273	pCi/L
Yttrium-88	U	0.420	+/-3.29	6.87	pCi/L
Zinc-65	U	-1.76	+/-7.18	13.3	pCi/L
Zirconium-95	U	1.37	+/-6.75	11.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.15	+/-5.29	9.08	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		33.9	+/-3.73	4.93	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	82.5	+/-98.6	166	300	pCi/L	MYM1	05/18/15	1045	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	371595018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:19		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.7	+/-25.8	37.3		pCi/L		MJH1	04/29/15	0850 1474077	1
Americium-241	U	6.32	+/-5.67	10.9		pCi/L					
Antimony-124	U	1.98	+/-11.9	24.0		pCi/L					
Antimony-125	U	5.43	+/-10.2	19.4		pCi/L					
Barium-133	U	3.93	+/-4.97	8.69		pCi/L					
Barium-140	U	-27.2	+/-35.0	58.1		pCi/L					
Beryllium-7	U	15.4	+/-47.1	77.0		pCi/L					
Bismuth-212	U	37.3	+/-72.6	118		pCi/L					
Bismuth-214	UI	0.00	+/-15.5	21.3		pCi/L					
Cerium-139	U	1.08	+/-2.95	5.29		pCi/L					
Cerium-141	U	-3.12	+/-7.04	10.3		pCi/L					
Cerium-144	U	-11.6	+/-18.8	32.2		pCi/L					
Cesium-134	U	1.66	+/-4.47	7.94		pCi/L					
Cesium-136	U	2.58	+/-14.1	23.6		pCi/L					
Cesium-137	U	5.47	+/-4.32	9.10	10.0	pCi/L					
Chromium-51	U	-22.8	+/-41.1	72.3		pCi/L					
Cobalt-56	U	1.85	+/-5.10	9.85		pCi/L					
Cobalt-57	U	-1.58	+/-2.21	3.77		pCi/L					
Cobalt-58	U	-3.19	+/-4.69	8.11		pCi/L					
Cobalt-60	U	1.30	+/-4.99	9.95		pCi/L					
Europium-152	U	-5.05	+/-12.3	19.0		pCi/L					
Europium-154	U	8.29	+/-13.3	27.9		pCi/L					
Europium-155	U	-2.33	+/-8.11	14.4		pCi/L					
Iridium-192	U	-1.1	+/-3.89	6.98		pCi/L					
Iron-59	U	-0.57	+/-11.3	20.7		pCi/L					
Lead-210	U	88.1	+/-126	97.1		pCi/L					
Lead-212	U	3.87	+/-9.04	13.7		pCi/L					
Lead-214	U	11.4	+/-11.6	18.3		pCi/L					
Manganese-54	U	-2.93	+/-3.99	6.83		pCi/L					
Mercury-203	U	1.41	+/-4.37	7.67		pCi/L					
Neodymium-147	U	-12.2	+/-78.4	138		pCi/L					
Neptunium-239	U	-1.15	+/-23.8	42.3		pCi/L					
Niobium-94	U	-2.58	+/-3.99	7.02		pCi/L					
Niobium-95	U	2.48	+/-4.99	9.76		pCi/L					
Potassium-40	U	-33.6	+/-60.1	109		pCi/L					
Promethium-144	U	1.20	+/-5.99	7.72		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 29 Project: WNUC00129  
Sample ID: 371595018 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	3.15	+/-6.41	9.10	pCi/L
Radium-228	U	-2.7	+/-25.8	37.3	pCi/L
Ruthenium-106	U	-16.5	+/-40.6	69.3	pCi/L
Silver-110m	U	-2.25	+/-4.78	6.87	pCi/L
Sodium-22	U	3.09	+/-4.73	9.93	pCi/L
Thallium-208	U	-0.798	+/-6.64	10.2	pCi/L
Thorium-230	U	8.46	+/-588	976	pCi/L
Thorium-234	U	-70.1	+/-71.8	131	pCi/L
Tin-113	U	-2.58	+/-4.66	8.12	pCi/L
Uranium-235	U	-12	+/-22.3	32.7	pCi/L
Uranium-238	U	-70.1	+/-71.8	131	pCi/L
Yttrium-88	U	-0.104	+/-4.65	9.31	pCi/L
Zinc-65	U	7.77	+/-10.1	18.8	pCi/L
Zirconium-95	U	0.573	+/-7.12	13.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.36	+/-3.50	4.68	5.00	pCi/L	KXB2	05/16/15	1335	1475947	2
Beta	10.2	+/-3.20	4.13	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-5.7	+/-94.8	168	300	pCi/L	MYM1	05/18/15	1102	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 371595019  
Matrix: Ground Water  
Collect Date: 13-APR-15 09:38  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-19.2	+/-17.1	23.9		pCi/L		MJH1	04/29/15	0847 1474077	1
Americium-241	U	8.67	+/-19.3	34.6		pCi/L					
Antimony-124	U	-6.8	+/-8.43	14.3		pCi/L					
Antimony-125	U	-6.51	+/-9.40	15.4		pCi/L					
Barium-133	U	-4.98	+/-4.46	7.15		pCi/L					
Barium-140	U	8.00	+/-23.8	45.0		pCi/L					
Beryllium-7	U	5.40	+/-29.7	55.2		pCi/L					
Bismuth-212	U	54.7	+/-42.6	87.1		pCi/L					
Bismuth-214		13.1	+/-8.53	12.8		pCi/L					
Cerium-139	U	0.181	+/-2.89	5.19		pCi/L					
Cerium-141	U	1.85	+/-9.81	10.5		pCi/L					
Cerium-144	U	-7.47	+/-19.9	34.2		pCi/L					
Cesium-134	U	0.0907	+/-3.71	6.69		pCi/L					
Cesium-136	U	-1.28	+/-10.2	18.7		pCi/L					
Cesium-137	U	-4.22	+/-4.81	7.38	10.0	pCi/L					
Chromium-51	U	-7.67	+/-38.3	66.3		pCi/L					
Cobalt-56	U	-0.755	+/-3.71	6.52		pCi/L					
Cobalt-57	U	-0.0267	+/-2.65	4.48		pCi/L					
Cobalt-58	U	-0.643	+/-3.57	6.32		pCi/L					
Cobalt-60	U	0.264	+/-3.41	6.47		pCi/L					
Europium-152	U	-5.83	+/-10.1	16.9		pCi/L					
Europium-154	U	-15.7	+/-10.7	14.3		pCi/L					
Europium-155	U	-3.63	+/-11.1	18.6		pCi/L					
Iridium-192	U	-1.86	+/-3.44	5.82		pCi/L					
Iron-59	U	-2.61	+/-6.93	12.5		pCi/L					
Lead-210	U	203	+/-1250	1080		pCi/L					
Lead-212	U	2.18	+/-10.0	11.3		pCi/L					
Lead-214	U	-4.56	+/-9.74	15.1		pCi/L					
Manganese-54	U	-2.17	+/-3.46	5.80		pCi/L					
Mercury-203	U	-1.34	+/-3.76	6.47		pCi/L					
Neodymium-147	U	5.44	+/-51.7	95.8		pCi/L					
Neptunium-239	U	-21	+/-28.7	46.5		pCi/L					
Niobium-94	U	2.69	+/-3.42	5.90		pCi/L					
Niobium-95	U	2.20	+/-4.24	7.09		pCi/L					
Potassium-40	U	52.6	+/-33.7	60.1		pCi/L					
Promethium-144	U	-0.0356	+/-4.37	6.30		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30 Project: WNUC00129  
Sample ID: 371595019 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.831	+/-3.95	7.35	pCi/L
Radium-228	U	-19.2	+/-17.1	23.9	pCi/L
Ruthenium-106	U	0.514	+/-34.3	54.1	pCi/L
Silver-110m	U	-5.2	+/-3.58	5.63	pCi/L
Sodium-22	U	-5.75	+/-3.84	5.08	pCi/L
Thallium-208	U	2.08	+/-5.34	6.28	pCi/L
Thorium-230	U	-481	+/-1320	2230	pCi/L
Thorium-234	U	-79.9	+/-197	329	pCi/L
Tin-113	U	-0.206	+/-4.29	7.47	pCi/L
Uranium-235	U	5.78	+/-30.7	38.1	pCi/L
Uranium-238	U	-79.9	+/-197	329	pCi/L
Yttrium-88	U	1.41	+/-4.32	8.69	pCi/L
Zinc-65	U	1.33	+/-7.15	13.6	pCi/L
Zirconium-95	U	-2.31	+/-6.78	11.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	23.0	+/-6.01	4.87	5.00	pCi/L	KXB2	05/16/15	1335	1475947	2
Beta	36.0	+/-4.48	3.52	5.00	pCi/L					
Alpha	24.3	+/-5.92	4.93	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta	35.1	+/-4.24	3.52	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.93	+/-93.1	163	300	pCi/L	MYM1	05/18/15	1118	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID: WELL 30  
Sample ID: 371595019

Project: WNUC00129  
Client ID: WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 371595020  
Matrix: Ground Water  
Collect Date: 13-APR-15 12:03  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.75	+/-16.3	25.2		pCi/L		MJH1	04/29/15	0847 1474077	1
Americium-241	U	-3.07	+/-29.5	48.8		pCi/L					
Antimony-124	U	10.0	+/-12.3	26.1		pCi/L					
Antimony-125	U	-5.87	+/-9.03	15.2		pCi/L					
Barium-133	U	-1.05	+/-5.32	8.17		pCi/L					
Barium-140	U	14.6	+/-29.2	54.6		pCi/L					
Beryllium-7	U	-6.14	+/-32.6	57.2		pCi/L					
Bismuth-212	U	-6.44	+/-52.3	83.8		pCi/L					
Bismuth-214		13.6	+/-9.60	12.3		pCi/L					
Cerium-139	U	-0.785	+/-3.41	5.71		pCi/L					
Cerium-141	U	-8.5	+/-9.50	11.7		pCi/L					
Cerium-144	U	-4.9	+/-22.3	37.7		pCi/L					
Cesium-134	U	0.779	+/-4.39	7.33		pCi/L					
Cesium-136	U	5.65	+/-9.59	19.6		pCi/L					
Cesium-137	U	-0.507	+/-3.84	7.07	10.0	pCi/L					
Chromium-51	U	20.4	+/-39.8	74.2		pCi/L					
Cobalt-56	U	-0.332	+/-3.94	7.27		pCi/L					
Cobalt-57	U	0.597	+/-2.95	5.14		pCi/L					
Cobalt-58	U	0.0896	+/-4.31	7.99		pCi/L					
Cobalt-60	U	0.0184	+/-3.66	7.18		pCi/L					
Europium-152	U	0.279	+/-9.97	18.0		pCi/L					
Europium-154	U	0.647	+/-9.73	19.4		pCi/L					
Europium-155	U	-1.18	+/-12.1	20.8		pCi/L					
Iridium-192	U	0.473	+/-3.89	7.03		pCi/L					
Iron-59	U	-3.89	+/-8.81	15.3		pCi/L					
Lead-210	U	322	+/-1120	2030		pCi/L					
Lead-212	U	5.53	+/-9.61	13.3		pCi/L					
Lead-214	U	2.37	+/-13.9	16.9		pCi/L					
Manganese-54	U	-3.21	+/-3.86	6.47		pCi/L					
Mercury-203	U	2.03	+/-4.10	7.61		pCi/L					
Neodymium-147	U	-23.2	+/-56.9	97.4		pCi/L					
Neptunium-239	U	27.0	+/-31.8	57.5		pCi/L					
Niobium-94	U	-2.07	+/-3.38	5.90		pCi/L					
Niobium-95	U	0.234	+/-3.79	7.14		pCi/L					
Potassium-40	U	-25.4	+/-58.9	101		pCi/L					
Promethium-144	U	2.08	+/-3.48	6.83		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 32 Project: WNUC00129  
Sample ID: 371595020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.192	+/-4.46	7.93	pCi/L
Radium-228	U	-6.75	+/-16.3	25.2	pCi/L
Ruthenium-106	U	8.28	+/-33.2	63.4	pCi/L
Silver-110m	U	1.29	+/-3.51	6.78	pCi/L
Sodium-22	U	0.362	+/-3.46	6.93	pCi/L
Thallium-208	U	2.72	+/-4.08	7.65	pCi/L
Thorium-230	U	1520	+/-2250	2780	pCi/L
Thorium-234	U	-72.1	+/-262	393	pCi/L
Tin-113	U	-4.28	+/-5.63	8.51	pCi/L
Uranium-235	U	-12.4	+/-29.8	38.1	pCi/L
Uranium-238	U	-72.1	+/-262	393	pCi/L
Yttrium-88	U	-0.19	+/-4.79	9.21	pCi/L
Zinc-65	U	-5.4	+/-8.47	14.2	pCi/L
Zirconium-95	U	0.807	+/-7.44	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		3.52	+/-1.97	2.99	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		189	+/-4.12	2.29	5.00	pCi/L					
Alpha	U	2.52	+/-3.11	4.97	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta		211	+/-9.05	3.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99		277	+/-111	172	300	pCi/L	MYM1	05/18/15	1135	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 371595020

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 33  
Sample ID: 371595021  
Matrix: Ground Water  
Collect Date: 14-APR-15 10:10  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-14.7	+/-14.1	21.2		pCi/L		MJH1	04/29/15	1113 1474078	1
Americium-241	U	13.0	+/-12.2	20.1		pCi/L					
Antimony-124	U	8.18	+/-5.00	14.0		pCi/L					
Antimony-125	U	1.95	+/-8.06	14.5		pCi/L					
Barium-133	U	-0.197	+/-5.48	8.20		pCi/L					
Barium-140	U	6.15	+/-21.4	40.8		pCi/L					
Beryllium-7	U	2.04	+/-27.6	51.4		pCi/L					
Bismuth-212	U	36.5	+/-29.4	71.3		pCi/L					
Bismuth-214		13.7	+/-10.6	10.9		pCi/L					
Cerium-139	U	1.72	+/-2.56	4.74		pCi/L					
Cerium-141	U	-1.24	+/-5.72	10.1		pCi/L					
Cerium-144	U	-5.43	+/-19.2	29.8		pCi/L					
Cesium-134	U	0.635	+/-3.30	6.19		pCi/L					
Cesium-136	U	2.97	+/-8.30	14.4		pCi/L					
Cesium-137	U	0.781	+/-3.19	5.99	10.0	pCi/L					
Chromium-51	U	-29.9	+/-37.6	62.4		pCi/L					
Cobalt-56	U	-2.76	+/-4.12	6.31		pCi/L					
Cobalt-57	U	-1.28	+/-2.32	4.07		pCi/L					
Cobalt-58	U	1.26	+/-3.08	5.95		pCi/L					
Cobalt-60	U	-2.16	+/-3.02	5.21		pCi/L					
Europium-152	U	6.92	+/-8.39	15.8		pCi/L					
Europium-154	U	-1.92	+/-8.19	15.4		pCi/L					
Europium-155	U	2.02	+/-8.73	16.0		pCi/L					
Iridium-192	U	0.629	+/-3.46	6.15		pCi/L					
Iron-59	U	4.26	+/-7.11	14.0		pCi/L					
Lead-210	U	214	+/-394	403		pCi/L					
Lead-212	U	6.57	+/-8.39	11.5		pCi/L					
Lead-214	U	11.3	+/-10.6	14.5		pCi/L					
Manganese-54	U	0.0176	+/-2.95	5.43		pCi/L					
Mercury-203	U	-0.0192	+/-3.46	6.11		pCi/L					
Neodymium-147	U	-18.8	+/-45.9	82.1		pCi/L					
Neptunium-239	U	-1.87	+/-23.6	42.5		pCi/L					
Niobium-94	U	2.10	+/-2.99	5.78		pCi/L					
Niobium-95	U	-0.869	+/-4.00	6.13		pCi/L					
Potassium-40	U	43.9	+/-54.4	46.5		pCi/L					
Promethium-144	U	0.360	+/-3.15	5.80		pCi/L					



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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 33	Project:	WNUC00129
Sample ID:	371595021	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.54	+/-4.07	7.03	pCi/L
Radium-228	U	-14.7	+/-14.1	21.2	pCi/L
Ruthenium-106	U	17.2	+/-31.4	55.5	pCi/L
Silver-110m	U	-1.4	+/-2.95	5.18	pCi/L
Sodium-22	U	-1.17	+/-2.97	5.42	pCi/L
Thallium-208	U	3.56	+/-6.34	6.03	pCi/L
Thorium-230	U	1330	+/-1250	1390	pCi/L
Thorium-234	U	42.6	+/-168	219	pCi/L
Tin-113	U	0.830	+/-3.89	6.97	pCi/L
Uranium-235	U	-9.24	+/-23.6	33.6	pCi/L
Uranium-238	U	42.6	+/-168	219	pCi/L
Yttrium-88	U	0.208	+/-3.73	7.25	pCi/L
Zinc-65	U	-1.65	+/-6.47	11.5	pCi/L
Zirconium-95	U	-4.45	+/-5.89	9.94	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.314	+/-2.11	4.36	5.00	pCi/L	KXB2	05/16/15	1336	1475947	2
Beta	U	2.00	+/-2.90	4.89	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	53.6	+/-99.6	170	300	pCi/L	MYM1	05/18/15	1151	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	371595022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 08:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.90	+/-19.2	31.9		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	-3.39	+/-31.1	50.1		pCi/L					
Antimony-124	U	6.94	+/-11.1	23.9		pCi/L					
Antimony-125	U	1.57	+/-9.90	18.1		pCi/L					
Barium-133	U	-2.3	+/-5.45	8.25		pCi/L					
Barium-140	U	42.2	+/-34.2	62.6		pCi/L					
Beryllium-7	U	-7.97	+/-36.4	64.1		pCi/L					
Bismuth-212	U	-20	+/-47.5	85.6		pCi/L					
Bismuth-214	U	6.14	+/-14.7	16.8		pCi/L					
Cerium-139	U	-1.9	+/-3.30	5.47		pCi/L					
Cerium-141	U	-3.79	+/-7.66	11.3		pCi/L					
Cerium-144	U	-6.54	+/-22.0	33.4		pCi/L					
Cesium-134	U	0.0243	+/-4.16	7.81		pCi/L					
Cesium-136	U	-7.06	+/-11.5	19.6		pCi/L					
Cesium-137	U	-2.36	+/-3.63	6.38	10.0	pCi/L					
Chromium-51	U	13.6	+/-41.7	77.7		pCi/L					
Cobalt-56	U	5.62	+/-5.00	6.69		pCi/L					
Cobalt-57	U	1.50	+/-2.76	5.00		pCi/L					
Cobalt-58	U	2.35	+/-4.62	6.99		pCi/L					
Cobalt-60	U	2.30	+/-4.34	9.00		pCi/L					
Europium-152	U	4.30	+/-10.5	19.7		pCi/L					
Europium-154	U	10.6	+/-9.57	22.3		pCi/L					
Europium-155	U	-3.77	+/-10.8	18.6		pCi/L					
Iridium-192	U	1.53	+/-3.87	7.23		pCi/L					
Iron-59	U	-3.96	+/-8.43	14.7		pCi/L					
Lead-210	U	-318	+/-1450	2240		pCi/L					
Lead-212	U	3.71	+/-8.86	11.2		pCi/L					
Lead-214	U	4.25	+/-11.5	16.8		pCi/L					
Manganese-54	U	0.146	+/-3.78	7.11		pCi/L					
Mercury-203	U	2.95	+/-4.23	7.67		pCi/L					
Neodymium-147	U	38.7	+/-71.9	128		pCi/L					
Neptunium-239	U	8.38	+/-29.4	52.6		pCi/L					
Niobium-94	U	1.69	+/-3.69	7.16		pCi/L					
Niobium-95	U	2.20	+/-3.73	7.56		pCi/L					
Potassium-40	U	41.2	+/-56.1	55.3		pCi/L					
Promethium-144	U	1.78	+/-3.92	7.58		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 38 Project: WNUC00129  
Sample ID: 371595022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.3	+/-4.55	7.45	pCi/L
Radium-228	U	3.90	+/-19.2	31.9	pCi/L
Ruthenium-106	U	-7.53	+/-36.7	63.7	pCi/L
Silver-110m	U	0.759	+/-3.63	6.97	pCi/L
Sodium-22	U	3.61	+/-3.35	7.79	pCi/L
Thallium-208	U	0.722	+/-5.29	5.45	pCi/L
Thorium-230	U	2060	+/-2990	2870	pCi/L
Thorium-234	U	192	+/-398	448	pCi/L
Tin-113	U	-2.37	+/-4.91	8.50	pCi/L
Uranium-235	U	4.88	+/-25.3	36.5	pCi/L
Uranium-238	U	192	+/-398	448	pCi/L
Yttrium-88	U	-0.956	+/-4.61	8.73	pCi/L
Zinc-65	U	-5.41	+/-8.54	14.4	pCi/L
Zirconium-95	U	2.52	+/-6.94	13.7	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.62	+/-2.37	4.16	5.00	pCi/L	KXB2	05/19/15	0921	1475947	2
Beta		6.86	+/-2.88	3.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	34.4	+/-99.1	171	300	pCi/L	MYM1	05/18/15	1208	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	371595023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	26.8	+/-32.2	33.4		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	1.82	+/-29.3	45.7		pCi/L					
Antimony-124	U	3.64	+/-11.9	21.3		pCi/L					
Antimony-125	U	0.290	+/-9.90	18.2		pCi/L					
Barium-133	U	-2.21	+/-4.91	8.23		pCi/L					
Barium-140	U	-4.47	+/-30.7	55.1		pCi/L					
Beryllium-7	U	21.1	+/-35.0	67.3		pCi/L					
Bismuth-212	U	18.4	+/-55.3	103		pCi/L					
Bismuth-214	U	1.01	+/-16.3	15.1		pCi/L					
Cerium-139	U	0.555	+/-4.03	6.38		pCi/L					
Cerium-141	U	2.88	+/-7.94	14.4		pCi/L					
Cerium-144	U	-2.47	+/-23.4	41.9		pCi/L					
Cesium-134	U	0.021	+/-4.54	8.47		pCi/L					
Cesium-136	U	-0.409	+/-11.9	22.1		pCi/L					
Cesium-137	U	3.67	+/-4.28	8.31	10.0	pCi/L					
Chromium-51	U	11.8	+/-47.0	83.3		pCi/L					
Cobalt-56	U	3.25	+/-4.36	8.75		pCi/L					
Cobalt-57	U	-1.79	+/-3.32	5.11		pCi/L					
Cobalt-58	U	-1.39	+/-4.15	7.52		pCi/L					
Cobalt-60	U	1.12	+/-3.87	7.86		pCi/L					
Europium-152	U	3.09	+/-11.6	20.7		pCi/L					
Europium-154	U	16.8	+/-9.86	22.5		pCi/L					
Europium-155	U	-1.11	+/-15.7	23.5		pCi/L					
Iridium-192	U	0.468	+/-4.40	7.71		pCi/L					
Iron-59	U	-6.09	+/-9.45	16.1		pCi/L					
Lead-210	U	-449	+/-1090	1580		pCi/L					
Lead-212	U	15.7	+/-13.5	16.5		pCi/L					
Lead-214	U	4.03	+/-10.9	17.1		pCi/L					
Manganese-54	U	2.93	+/-4.01	8.00		pCi/L					
Mercury-203	U	0.943	+/-4.45	7.92		pCi/L					
Neodymium-147	U	-33.3	+/-61.2	106		pCi/L					
Neptunium-239	U	-11.2	+/-32.5	57.8		pCi/L					
Niobium-94	U	1.45	+/-4.16	7.63		pCi/L					
Niobium-95	U	1.95	+/-5.15	8.62		pCi/L					
Potassium-40	U	-31.2	+/-52.3	93.1		pCi/L					
Promethium-144	U	-3.05	+/-4.34	7.22		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 39 Project: WNUC00129  
Sample ID: 371595023 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.27	+/-4.97	9.22	pCi/L
Radium-228	U	26.8	+/-32.2	33.4	pCi/L
Ruthenium-106	U	17.0	+/-34.6	65.6	pCi/L
Silver-110m	U	-0.288	+/-3.81	6.84	pCi/L
Sodium-22	U	5.94	+/-3.48	6.94	pCi/L
Thallium-208	U	0.346	+/-8.32	7.36	pCi/L
Thorium-230	U	1200	+/-2120	2970	pCi/L
Thorium-234	U	198	+/-304	450	pCi/L
Tin-113	U	2.07	+/-4.71	8.96	pCi/L
Uranium-235	U	-6.16	+/-28.5	46.1	pCi/L
Uranium-238	U	198	+/-304	450	pCi/L
Yttrium-88	U	-6.15	+/-5.26	7.92	pCi/L
Zinc-65	U	-1.68	+/-8.77	15.9	pCi/L
Zirconium-95	U	0.883	+/-7.60	13.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.34	+/-2.88	4.63	5.00	pCi/L	KXB2	05/17/15	1326	1475947	2
Beta		22.6	+/-1.86	2.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	90.1	+/-104	174	300	pCi/L	MYM1	05/18/15	1224	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.0	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371595024  
Matrix: Ground Water  
Collect Date: 09-APR-15 10:09  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-2.67	+/-20.3	32.0		pCi/L		MJH1	04/30/15	0736 1474078	1
Americium-241	U	0.199	+/-41.1	60.8		pCi/L					
Antimony-124	U	1.88	+/-9.41	19.1		pCi/L					
Antimony-125	U	3.51	+/-10.9	17.5		pCi/L					
Barium-133	U	-2.45	+/-5.98	8.80		pCi/L					
Barium-140	U	40.5	+/-39.8	77.5		pCi/L					
Beryllium-7	U	-31.6	+/-38.2	63.4		pCi/L					
Bismuth-212	U	25.9	+/-54.0	101		pCi/L					
Bismuth-214	U	9.62	+/-9.69	16.3		pCi/L					
Cerium-139	U	-2.12	+/-3.61	6.22		pCi/L					
Cerium-141	U	-3.21	+/-11.2	15.6		pCi/L					
Cerium-144	U	19.9	+/-28.3	43.6		pCi/L					
Cesium-134	U	0.680	+/-4.85	8.72		pCi/L					
Cesium-136	U	12.0	+/-14.4	29.4		pCi/L					
Cesium-137	U	1.06	+/-3.49	6.53	10.0	pCi/L					
Chromium-51	U	-8.17	+/-47.1	82.9		pCi/L					
Cobalt-56	U	2.82	+/-4.47	8.83		pCi/L					
Cobalt-57	U	0.194	+/-4.43	6.09		pCi/L					
Cobalt-58	U	1.62	+/-3.92	7.47		pCi/L					
Cobalt-60	U	-0.415	+/-3.85	7.24		pCi/L					
Europium-152	U	-2.34	+/-14.1	21.2		pCi/L					
Europium-154	U	2.99	+/-10.4	20.6		pCi/L					
Europium-155	U	2.19	+/-13.8	24.8		pCi/L					
Iridium-192	U	0.204	+/-4.78	7.51		pCi/L					
Iron-59	U	-10.2	+/-11.9	18.3		pCi/L					
Lead-210	U	725	+/-1170	1630		pCi/L					
Lead-212	U	2.54	+/-9.80	14.4		pCi/L					
Lead-214	U	7.91	+/-12.7	16.4		pCi/L					
Manganese-54	U	-1.34	+/-4.22	7.61		pCi/L					
Mercury-203	U	-1.48	+/-4.84	8.41		pCi/L					
Neodymium-147	U	-73.3	+/-88.4	146		pCi/L					
Neptunium-239	U	-6.01	+/-34.7	61.3		pCi/L					
Niobium-94	U	0.260	+/-3.67	6.58		pCi/L					
Niobium-95	U	1.59	+/-4.81	8.84		pCi/L					
Potassium-40	U	-34.1	+/-59.2	106		pCi/L					
Promethium-144	U	2.11	+/-4.09	7.59		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371595024

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.5	+/-4.99	8.38	pCi/L
Radium-228	U	-2.67	+/-20.3	32.0	pCi/L
Ruthenium-106	U	9.97	+/-37.4	68.1	pCi/L
Silver-110m	U	-1.36	+/-3.72	6.43	pCi/L
Sodium-22	U	0.0399	+/-3.79	7.24	pCi/L
Thallium-208	U	0.490	+/-8.16	7.70	pCi/L
Thorium-230	U	248	+/-2420	3690	pCi/L
Thorium-234	U	477	+/-548	559	pCi/L
Tin-113	U	3.80	+/-4.92	9.29	pCi/L
Uranium-235	U	-30.1	+/-32.5	43.5	pCi/L
Uranium-238	U	477	+/-548	559	pCi/L
Yttrium-88	U	0.879	+/-4.18	8.55	pCi/L
Zinc-65	U	-4.09	+/-8.90	15.8	pCi/L
Zirconium-95	U	0.725	+/-8.19	14.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.0761	+/-2.21	4.73	5.00	pCi/L	KXB2	05/16/15	1341	1475947	2
Beta		17.6	+/-3.87	4.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	62.2	+/-105	178	300	pCi/L	MYM1	05/18/15	1241	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	371595025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:50		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.2	+/-15.2	27.8		pCi/L		MJH1	04/30/15	0737 1474078	1
Americium-241	U	-24.7	+/-19.8	33.5		pCi/L					
Antimony-124	U	6.59	+/-8.93	19.5		pCi/L					
Antimony-125	U	3.94	+/-10.5	19.4		pCi/L					
Barium-133	U	3.26	+/-5.86	9.57		pCi/L					
Barium-140	U	-9.01	+/-37.3	56.2		pCi/L					
Beryllium-7	U	14.2	+/-39.2	71.8		pCi/L					
Bismuth-212	U	-58	+/-69.8	103		pCi/L					
Bismuth-214	U	3.87	+/-12.9	14.8		pCi/L					
Cerium-139	U	-2.14	+/-3.60	6.07		pCi/L					
Cerium-141	U	4.75	+/-7.68	13.8		pCi/L					
Cerium-144	U	-11	+/-25.0	42.9		pCi/L					
Cesium-134	U	-0.568	+/-5.12	8.07		pCi/L					
Cesium-136	U	2.57	+/-10.4	19.9		pCi/L					
Cesium-137	U	0.537	+/-4.34	7.77	10.0	pCi/L					
Chromium-51	U	6.54	+/-44.8	81.4		pCi/L					
Cobalt-56	U	1.70	+/-5.07	9.50		pCi/L					
Cobalt-57	U	-1.25	+/-3.11	5.36		pCi/L					
Cobalt-58	U	-2.49	+/-4.82	8.49		pCi/L					
Cobalt-60	U	1.47	+/-4.08	7.91		pCi/L					
Europium-152	U	6.43	+/-12.6	21.4		pCi/L					
Europium-154	U	3.58	+/-10.3	20.2		pCi/L					
Europium-155	U	5.21	+/-12.8	22.9		pCi/L					
Iridium-192	U	-0.593	+/-4.15	7.43		pCi/L					
Iron-59	U	3.40	+/-7.48	14.9		pCi/L					
Lead-210	U	-166	+/-621	956		pCi/L					
Lead-212	U	2.29	+/-9.35	14.0		pCi/L					
Lead-214	U	8.26	+/-15.4	17.5		pCi/L					
Manganese-54	U	1.52	+/-4.29	8.09		pCi/L					
Mercury-203	U	-4.25	+/-6.78	10.1		pCi/L					
Neodymium-147	U	-26	+/-84.7	126		pCi/L					
Neptunium-239	U	-40.2	+/-32.9	54.7		pCi/L					
Niobium-94	U	-0.565	+/-3.98	6.95		pCi/L					
Niobium-95	U	-2.36	+/-4.68	7.87		pCi/L					
Potassium-40	U	3.71	+/-51.9	61.4		pCi/L					
Promethium-144	U	0.500	+/-5.01	7.69		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 43 Project: WNUC00129  
Sample ID: 371595025 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.2	+/-5.38	9.24	pCi/L
Radium-228	U	12.2	+/-15.2	27.8	pCi/L
Ruthenium-106	U	-2.17	+/-40.0	70.5	pCi/L
Silver-110m	U	0.852	+/-4.16	7.49	pCi/L
Sodium-22	U	1.15	+/-3.62	7.09	pCi/L
Thallium-208	U	-1.7	+/-5.62	7.91	pCi/L
Thorium-230	U	-603	+/-1380	2420	pCi/L
Thorium-234	U	-182	+/-208	328	pCi/L
Tin-113	U	0.707	+/-5.46	9.88	pCi/L
Uranium-235	U	-33.3	+/-29.6	43.9	pCi/L
Uranium-238	U	-182	+/-208	328	pCi/L
Yttrium-88	U	-1.81	+/-4.38	7.93	pCi/L
Zinc-65	U	-5.72	+/-8.83	15.1	pCi/L
Zirconium-95	U	1.98	+/-8.06	14.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-1.05	+/-2.15	4.81	5.00	pCi/L	KXB2	05/18/15	1446	1475947	2
Beta		3.67	+/-2.14	3.10	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	100	+/-105	175	300	pCi/L	MYM1	05/18/15	1257	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	371595026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:34		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	3.02	+/-15.3	28.4		pCi/L		MJH1	04/30/15	0737 1474078	1
Americium-241	U	-26.3	+/-12.8	17.8		pCi/L					
Antimony-124	U	-4.15	+/-7.88	13.6		pCi/L					
Antimony-125	U	-3.66	+/-8.84	15.6		pCi/L					
Barium-133	U	2.45	+/-4.38	7.28		pCi/L					
Barium-140	U	9.06	+/-26.2	48.5		pCi/L					
Beryllium-7	U	-12.2	+/-30.5	53.5		pCi/L					
Bismuth-212	U	4.47	+/-52.3	78.6		pCi/L					
Bismuth-214	U	3.53	+/-12.9	13.0		pCi/L					
Cerium-139	U	-1.74	+/-2.88	4.89		pCi/L					
Cerium-141	U	0.905	+/-6.94	11.3		pCi/L					
Cerium-144	U	2.75	+/-20.4	31.8		pCi/L					
Cesium-134	U	2.01	+/-3.56	6.08		pCi/L					
Cesium-136	U	-0.962	+/-9.15	16.9		pCi/L					
Cesium-137	U	-1.16	+/-3.64	6.33	10.0	pCi/L					
Chromium-51	U	22.3	+/-38.5	68.6		pCi/L					
Cobalt-56	U	4.66	+/-4.06	7.94		pCi/L					
Cobalt-57	U	1.40	+/-2.60	4.19		pCi/L					
Cobalt-58	U	-0.194	+/-3.41	6.10		pCi/L					
Cobalt-60	U	4.35	+/-3.49	6.99		pCi/L					
Europium-152	U	-0.435	+/-8.83	16.0		pCi/L					
Europium-154	U	-9.16	+/-11.2	13.5		pCi/L					
Europium-155	U	-3.63	+/-9.82	17.1		pCi/L					
Iridium-192	U	7.16E-05	+/-3.55	6.11		pCi/L					
Iron-59	U	-8.49	+/-8.53	12.7		pCi/L					
Lead-210	U	-52.7	+/-224	333		pCi/L					
Lead-212	U	8.60	+/-8.32	11.8		pCi/L					
Lead-214	U	4.82	+/-8.80	13.4		pCi/L					
Manganese-54	U	0.0831	+/-3.20	5.75		pCi/L					
Mercury-203	U	1.50	+/-3.81	6.72		pCi/L					
Neodymium-147	U	-15.5	+/-54.5	96.4		pCi/L					
Neptunium-239	U	-11.1	+/-26.0	45.1		pCi/L					
Niobium-94	U	-1.54	+/-3.29	5.63		pCi/L					
Niobium-95	U	-0.352	+/-3.59	6.37		pCi/L					
Potassium-40	U	6.44	+/-43.3	52.8		pCi/L					
Promethium-144	U	0.552	+/-3.45	6.22		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 44 Project: WNUC00129  
Sample ID: 371595026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.449	+/-3.88	7.10	pCi/L
Radium-228	U	3.02	+/-15.3	28.4	pCi/L
Ruthenium-106	U	-4.54	+/-30.7	54.4	pCi/L
Silver-110m	U	-1.23	+/-3.31	5.75	pCi/L
Sodium-22	U	-3.28	+/-3.96	4.72	pCi/L
Thallium-208	U	1.32	+/-4.65	6.96	pCi/L
Thorium-230	U	1130	+/-870	1240	pCi/L
Thorium-234	U	-29.4	+/-123	193	pCi/L
Tin-113	U	1.32	+/-4.06	7.54	pCi/L
Uranium-235	U	-23.8	+/-26.0	35.0	pCi/L
Uranium-238	U	-29.4	+/-123	193	pCi/L
Yttrium-88	U	-3.19	+/-3.81	6.45	pCi/L
Zinc-65	U	0.513	+/-6.70	12.6	pCi/L
Zirconium-95	U	-3.87	+/-7.32	11.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		4.44	+/-3.02	4.30	5.00	pCi/L	KXB2	05/16/15	1352	1475947	2
Beta	U	4.15	+/-2.93	4.69	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	12.4	+/-98.2	172	300	pCi/L	MYM1	05/18/15	1314	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371595027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 11:21		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-9.72	+/-17.3	26.0		pCi/L		MJH1	04/30/15	0738 1474078	1
Americium-241	U	13.5	+/-19.4	35.2		pCi/L					
Antimony-124	U	-4.11	+/-7.00	12.5		pCi/L					
Antimony-125	U	1.05	+/-11.0	16.8		pCi/L					
Barium-133	U	-0.597	+/-4.92	7.42		pCi/L					
Barium-140	U	7.38	+/-22.6	42.5		pCi/L					
Beryllium-7	U	10.3	+/-27.4	51.9		pCi/L					
Bismuth-212	U	-11.9	+/-43.0	75.9		pCi/L					
Bismuth-214		23.5	+/-9.57	11.0		pCi/L					
Cerium-139	U	0.752	+/-3.06	5.17		pCi/L					
Cerium-141	U	8.57	+/-6.86	11.8		pCi/L					
Cerium-144	U	0.480	+/-20.8	37.6		pCi/L					
Cesium-134	U	-0.642	+/-3.53	5.40		pCi/L					
Cesium-136	U	2.83	+/-8.25	16.2		pCi/L					
Cesium-137	U	-5.71	+/-4.78	7.11	10.0	pCi/L					
Chromium-51	U	21.9	+/-37.2	67.6		pCi/L					
Cobalt-56	U	-1.15	+/-3.78	6.57		pCi/L					
Cobalt-57	U	-0.724	+/-2.72	4.51		pCi/L					
Cobalt-58	U	1.24	+/-3.36	6.34		pCi/L					
Cobalt-60	U	-2.32	+/-4.01	5.66		pCi/L					
Europium-152	U	-2.38	+/-9.70	16.7		pCi/L					
Europium-154	U	-4.57	+/-11.8	19.4		pCi/L					
Europium-155	U	-6.38	+/-11.1	18.2		pCi/L					
Iridium-192	U	-0.204	+/-3.56	6.21		pCi/L					
Iron-59	U	-6.25	+/-7.81	13.2		pCi/L					
Lead-210	U	-113	+/-779	1200		pCi/L					
Lead-212	U	2.89	+/-10.1	10.5		pCi/L					
Lead-214	U	0.964	+/-12.9	12.9		pCi/L					
Manganese-54	U	-0.448	+/-3.11	5.52		pCi/L					
Mercury-203	U	3.98	+/-3.77	7.04		pCi/L					
Neodymium-147	U	26.8	+/-46.9	90.0		pCi/L					
Neptunium-239	U	-14.1	+/-29.1	47.8		pCi/L					
Niobium-94	U	4.78	+/-3.28	6.59		pCi/L					
Niobium-95	U	2.67	+/-3.80	7.26		pCi/L					
Potassium-40	U	50.4	+/-69.6	63.1		pCi/L					
Promethium-144	U	-0.597	+/-3.84	6.04		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371595027	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.68	+/-4.11	7.74	pCi/L
Radium-228	U	-9.72	+/-17.3	26.0	pCi/L
Ruthenium-106	U	16.9	+/-29.8	56.7	pCi/L
Silver-110m	U	-0.592	+/-3.51	6.23	pCi/L
Sodium-22	U	-1.62	+/-4.15	6.84	pCi/L
Thallium-208	U	2.32	+/-6.20	5.79	pCi/L
Thorium-230	U	761	+/-1360	2400	pCi/L
Thorium-234	U	-131	+/-198	326	pCi/L
Tin-113	U	1.75	+/-4.65	8.29	pCi/L
Uranium-235	U	-15.1	+/-26.4	38.0	pCi/L
Uranium-238	U	-131	+/-198	326	pCi/L
Yttrium-88	U	-2.48	+/-3.96	6.92	pCi/L
Zinc-65	U	3.99	+/-7.19	12.9	pCi/L
Zirconium-95	U	0.376	+/-6.36	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.07	+/-2.40	3.99	5.00	pCi/L	KXB2	05/16/15	1342	1475947	2
Beta		74.6	+/-6.03	4.93	5.00	pCi/L					
Alpha	U	1.33	+/-2.68	4.97	5.00	pCi/L	KXB2	05/18/15	1446	1475947	3
Beta		69.2	+/-7.01	3.41	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	116	+/-104	173	300	pCi/L	MYM1	05/18/15	1330	1475755	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.0	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 47  
Sample ID: 371595027

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	371595028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:35		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.7	+/-15.5	23.3		pCi/L		MJH1	04/30/15	0738 1474078	1
Americium-241	U	20.2	+/-18.2	30.7		pCi/L					
Antimony-124	U	6.93	+/-9.10	19.5		pCi/L					
Antimony-125	U	3.35	+/-8.18	15.1		pCi/L					
Barium-133	U	1.70	+/-4.33	7.91		pCi/L					
Barium-140	U	6.60	+/-33.3	60.5		pCi/L					
Beryllium-7	U	-0.185	+/-30.9	55.4		pCi/L					
Bismuth-212	U	63.0	+/-48.1	87.7		pCi/L					
Bismuth-214	U	-1.59	+/-9.27	14.6		pCi/L					
Cerium-139	U	-0.721	+/-3.61	5.38		pCi/L					
Cerium-141	U	-6.07	+/-7.19	11.7		pCi/L					
Cerium-144	U	-2.78	+/-20.8	35.5		pCi/L					
Cesium-134	U	1.48	+/-3.24	6.33		pCi/L					
Cesium-136	U	0.209	+/-11.7	21.9		pCi/L					
Cesium-137	U	-1.38	+/-3.11	5.29	10.0	pCi/L					
Chromium-51	U	-19.3	+/-41.9	73.3		pCi/L					
Cobalt-56	U	2.49	+/-3.39	6.78		pCi/L					
Cobalt-57	U	0.351	+/-2.76	4.77		pCi/L					
Cobalt-58	U	-0.453	+/-3.62	6.66		pCi/L					
Cobalt-60	U	1.82	+/-3.23	6.48		pCi/L					
Europium-152	U	-3.58	+/-9.34	16.4		pCi/L					
Europium-154	U	11.7	+/-12.0	18.6		pCi/L					
Europium-155	U	6.00	+/-10.6	18.8		pCi/L					
Iridium-192	U	0.116	+/-3.51	6.32		pCi/L					
Iron-59	U	-9.64	+/-8.09	9.89		pCi/L					
Lead-210	U	340	+/-610	803		pCi/L					
Lead-212	U	8.40	+/-7.66	11.7		pCi/L					
Lead-214	U	2.54	+/-8.67	14.1		pCi/L					
Manganese-54	U	3.06	+/-3.26	5.84		pCi/L					
Mercury-203	U	0.638	+/-3.81	6.74		pCi/L					
Neodymium-147	U	-31.9	+/-75.3	129		pCi/L					
Neptunium-239	U	-9.0	+/-28.6	48.4		pCi/L					
Niobium-94	U	-0.345	+/-2.86	5.01		pCi/L					
Niobium-95	U	0.917	+/-3.52	6.72		pCi/L					
Potassium-40	U	-35.5	+/-50.7	93.3		pCi/L					
Promethium-144	U	1.55	+/-3.05	5.65		pCi/L					

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## Certificate of Analysis

Report Date: May 19, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 48 Project: WNUC00129  
Sample ID: 371595028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.787	+/-3.85	7.00	pCi/L
Radium-228	U	-10.7	+/-15.5	23.3	pCi/L
Ruthenium-106	U	-9.87	+/-29.5	50.7	pCi/L
Silver-110m	U	0.213	+/-3.14	5.60	pCi/L
Sodium-22	U	4.13	+/-4.25	4.27	pCi/L
Thallium-208	U	-3.45	+/-4.17	6.30	pCi/L
Thorium-230	U	-866	+/-1350	1920	pCi/L
Thorium-234	U	147	+/-219	241	pCi/L
Tin-113	U	2.46	+/-4.26	7.94	pCi/L
Uranium-235	U	-7.68	+/-23.6	35.4	pCi/L
Uranium-238	U	147	+/-219	241	pCi/L
Yttrium-88	U	-2.1	+/-3.75	6.68	pCi/L
Zinc-65	U	-0.196	+/-6.58	10.7	pCi/L
Zirconium-95	U	-0.112	+/-7.10	11.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.44	+/-2.62	4.19	5.00	pCi/L	KXB2	05/16/15	1342	1475947	2
Beta		11.4	+/-3.69	4.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-40.5	+/-93.5	169	300	pCi/L	MYM1	05/18/15	1347	1475755	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## QC Summary

Report Date: May 19, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 371595

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
QC1203306677	371595001	DUP									
Actinium-228	U	-20.4	U	12.3	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-19.4		+/-18.9							
Americium-241	U	16.3	U	-9.67	pCi/L	N/A		N/A			
	Uncertainty	+/-33.1		+/-19.7							
Antimony-124	U	1.18	U	5.51	pCi/L	N/A		N/A			
	Uncertainty	+/-11.0		+/-9.77							
Antimony-125	U	4.83	U	2.04	pCi/L	N/A		N/A			
	Uncertainty	+/-11.1		+/-11.3							
Barium-133	U	-1.35	U	-3.21	pCi/L	N/A		N/A			
	Uncertainty	+/-4.94		+/-5.39							
Barium-140	U	-19.2	U	16.6	pCi/L	N/A		N/A			
	Uncertainty	+/-35.7		+/-41.6							
Beryllium-7	U	6.01	U	-11	pCi/L	N/A		N/A			
	Uncertainty	+/-34.2		+/-45.0							
Bismuth-212	U	-15.9	U	-16.9	pCi/L	N/A		N/A			
	Uncertainty	+/-59.9		+/-72.3							
Bismuth-214	U	-14.7	U	8.55	pCi/L	N/A		N/A			
	Uncertainty	+/-12.6		+/-11.6							
Cerium-139	U	1.65	U	-1.39	pCi/L	N/A		N/A			
	Uncertainty	+/-3.47		+/-3.84							
Cerium-141	U	-4.61	U	4.39	pCi/L	N/A		N/A			
	Uncertainty	+/-7.43		+/-8.98							
Cerium-144	U	6.76	U	-11	pCi/L	N/A		N/A			
	Uncertainty	+/-21.3		+/-24.6							
Cesium-134	U	2.56	U	-2.86	pCi/L	N/A		N/A			
	Uncertainty	+/-4.31		+/-4.42							
Cesium-136	U	-3.66	U	10.7	pCi/L	N/A		N/A			
	Uncertainty	+/-13.3		+/-16.2							
Cesium-137	U	-0.249	UI	0.00	pCi/L	N/A		N/A			
	Uncertainty	+/-3.89		+/-5.05							
Chromium-51	U	-6.74	U	26.6	pCi/L	N/A		N/A			
	Uncertainty	+/-47.8		+/-52.6							
Cobalt-56	U	4.67	U	-3.91	pCi/L	N/A		N/A			
	Uncertainty	+/-4.26		+/-5.33							
Cobalt-57	U	-1.17	U	2.50	pCi/L	N/A		N/A			
	Uncertainty	+/-2.86		+/-3.22							
Cobalt-58	U	-1.73	U	3.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.90		+/-4.60							
Cobalt-60	U	-1.91	U	3.19	pCi/L	N/A		N/A			
	Uncertainty	+/-3.57		+/-3.79							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Europium-152	U	-2.24	U	2.25	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-11.5		+/-12.3							
Europium-154	U	13.8	U	-5.2	pCi/L	N/A		N/A			
	Uncertainty	+/-12.4		+/-10.5							
Europium-155	U	0.070	U	-5.61	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-12.8							
Iridium-192	U	-0.259	U	-1.59	pCi/L	N/A		N/A			
	Uncertainty	+/-4.31		+/-4.67							
Iron-59	U	-5.36	U	-2.87	pCi/L	N/A		N/A			
	Uncertainty	+/-9.49		+/-9.35							
Lead-210	U	1440	U	-298	pCi/L	N/A		N/A			
	Uncertainty	+/-1180		+/-613							
Lead-212	U	-12.4	U	11.8	pCi/L	N/A		N/A			
	Uncertainty	+/-8.93		+/-11.9							
Lead-214	U	-6.17	U	-7.76	pCi/L	N/A		N/A			
	Uncertainty	+/-10.3		+/-11.4							
Manganese-54	U	-0.225	U	-3.56	pCi/L	N/A		N/A			
	Uncertainty	+/-3.91		+/-4.16							
Mercury-203	U	-0.0597	U	-6.97	pCi/L	N/A		N/A			
	Uncertainty	+/-4.46		+/-7.12							
Neodymium-147	U	3.63	U	-68.9	pCi/L	N/A		N/A			
	Uncertainty	+/-74.6		+/-94.4							
Neptunium-239	U	-14.6	U	-15.3	pCi/L	N/A		N/A			
	Uncertainty	+/-31.1		+/-32.2							
Niobium-94	U	-2.19	U	-1.92	pCi/L	N/A		N/A			
	Uncertainty	+/-3.66		+/-4.06							
Niobium-95	U	-0.0521	U	3.43	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-5.36							
Potassium-40	U	-66.8	U	-37.7	pCi/L	N/A		N/A			
	Uncertainty	+/-48.7		+/-55.1							
Promethium-144	U	1.11	U	2.31	pCi/L	N/A		N/A			
	Uncertainty	+/-3.63		+/-4.47							
Promethium-146	U	0.140	U	-1.99	pCi/L	N/A		N/A			
	Uncertainty	+/-4.61		+/-5.92							
Radium-228	U	-20.4	U	12.3	pCi/L	N/A		N/A			
	Uncertainty	+/-19.4		+/-18.9							
Ruthenium-106	U	15.2	U	-14.8	pCi/L	N/A		N/A			
	Uncertainty	+/-33.4		+/-37.6							
Silver-110m	U	1.57	U	2.60	pCi/L	N/A		N/A			
	Uncertainty	+/-3.68		+/-3.71							
Sodium-22	U	4.95	U	-1.25	pCi/L	N/A		N/A			
	Uncertainty	+/-4.39		+/-3.64							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Thallium-208	U	-0.92	U	4.22	pCi/L	N/A		N/A			
	Uncertainty	+/-5.08		+/-5.64							
Thorium-230	U	-1060	U	73.1	pCi/L	N/A		N/A	MJH1	04/29/15	11:11
	Uncertainty	+/-1770		+/-1320							
Thorium-234	U	55.9	U	-270	pCi/L	N/A		N/A			
	Uncertainty	+/-404		+/-200							
Tin-113	U	2.13	U	3.82	pCi/L	N/A		N/A			
	Uncertainty	+/-5.23		+/-5.78							
Uranium-235	U	-29	U	6.49	pCi/L	N/A		N/A			
	Uncertainty	+/-27.1		+/-31.5							
Uranium-238	U	55.9	U	-270	pCi/L	N/A		N/A			
	Uncertainty	+/-404		+/-200							
Yttrium-88	U	5.65	U	3.87	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-4.60							
Zinc-65	U	0.997	U	2.30	pCi/L	N/A		N/A			
	Uncertainty	+/-10.5		+/-7.88							
Zirconium-95	U	-1.64	U	3.71	pCi/L	N/A		N/A			
	Uncertainty	+/-8.86		+/-9.51							
QC1203306678	LCS										
Actinium-228			U	-173	pCi/L					04/29/15	10:37
	Uncertainty			+/-967							
Americium-241	1.10E+05			1.26E+05	pCi/L		114	(75%-125%)			
	Uncertainty			+/-2960							
Antimony-124			U	236	pCi/L						
	Uncertainty			+/-186							
Antimony-125			U	-11.3	pCi/L						
	Uncertainty			+/-593							
Barium-133			U	14.6	pCi/L						
	Uncertainty			+/-211							
Barium-140			U	-314	pCi/L						
	Uncertainty			+/-710							
Beryllium-7			U	1090	pCi/L						
	Uncertainty			+/-1610							
Bismuth-212			U	86.8	pCi/L						
	Uncertainty			+/-2530							
Bismuth-214			U	-72.8	pCi/L						
	Uncertainty			+/-337							
Cerium-139			U	179	pCi/L						
	Uncertainty			+/-163							
Cerium-141			U	-210	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	-324	pCi/L						
	Uncertainty			+/-1010							
Cesium-134			U	-68	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Cesium-136			U	+/-225 334	pCi/L				MJH1	04/29/15	10:37
	Uncertainty			+/-367							
Cesium-137	44200			46500	pCi/L		105	(75%-125%)			
	Uncertainty			+/-823							
Chromium-51			U	615	pCi/L						
	Uncertainty			+/-1580							
Cobalt-56			U	-16.8	pCi/L						
	Uncertainty			+/-215							
Cobalt-57				2200	pCi/L						
	Uncertainty			+/-214							
Cobalt-58			U	-50.1	pCi/L						
	Uncertainty			+/-198							
Cobalt-60	50400			51800	pCi/L		103	(75%-125%)			
	Uncertainty			+/-1010							
Europium-152			U	-44.6	pCi/L						
	Uncertainty			+/-524							
Europium-154			U	-14.3	pCi/L						
	Uncertainty			+/-341							
Europium-155			U	-48	pCi/L						
	Uncertainty			+/-489							
Iridium-192			U	-31.3	pCi/L						
	Uncertainty			+/-180							
Iron-59			U	93.1	pCi/L						
	Uncertainty			+/-477							
Lead-210				1.44E+06	pCi/L						
	Uncertainty			+/-65100							
Lead-212			U	151	pCi/L						
	Uncertainty			+/-278							
Lead-214			U	157	pCi/L						
	Uncertainty			+/-375							
Manganese-54			U	74.1	pCi/L						
	Uncertainty			+/-208							
Mercury-203			U	184	pCi/L						
	Uncertainty			+/-181							
Neodymium-147			U	299	pCi/L						
	Uncertainty			+/-1340							
Neptunium-239			U	123	pCi/L						
	Uncertainty			+/-1430							
Niobium-94			U	93.4	pCi/L						
	Uncertainty			+/-169							
Niobium-95			U	-105	pCi/L						
	Uncertainty			+/-195							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Potassium-40			U	-321	pCi/L						
	Uncertainty			+/-1020							
Promethium-144			U	-22	pCi/L				MJH1	04/29/15	10:37
	Uncertainty			+/-162							
Promethium-146			U	182	pCi/L						
	Uncertainty			+/-277							
Radium-228			U	-173	pCi/L						
	Uncertainty			+/-967							
Ruthenium-106			U	-1900	pCi/L						
	Uncertainty			+/-1570							
Silver-110m				1520	pCi/L						
	Uncertainty			+/-254							
Sodium-22			U	-3.14	pCi/L						
	Uncertainty			+/-119							
Thallium-208			U	-32	pCi/L						
	Uncertainty			+/-181							
Thorium-230			U	64500	pCi/L						
	Uncertainty			+/-61600							
Thorium-234			U	-12600	pCi/L						
	Uncertainty			+/-8140							
Tin-113			U	88.0	pCi/L						
	Uncertainty			+/-227							
Uranium-235			U	712	pCi/L						
	Uncertainty			+/-847							
Uranium-238			U	-12600	pCi/L						
	Uncertainty			+/-8140							
Yttrium-88				253	pCi/L						
	Uncertainty			+/-174							
Zinc-65				7020	pCi/L						
	Uncertainty			+/-1100							
Zirconium-95			U	-194	pCi/L						
	Uncertainty			+/-342							
QC1203306676	MB										
Actinium-228			U	1.34	pCi/L					04/29/15	10:07
	Uncertainty			+/-18.2							
Americium-241			U	3.85	pCi/L						
	Uncertainty			+/-10.4							
Antimony-124			U	3.31	pCi/L						
	Uncertainty			+/-7.20							
Antimony-125			U	0.780	pCi/L						
	Uncertainty			+/-8.30							
Barium-133			U	-4.88	pCi/L						
	Uncertainty			+/-4.74							
Barium-140			U	0.752	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Beryllium-7			U	+/-12.6 -5.04	pCi/L				MJH1	04/29/15	10:07
	Uncertainty			+/-27.2							
Bismuth-212			U	7.14	pCi/L						
	Uncertainty			+/-57.2							
Bismuth-214			U	-8.45	pCi/L						
	Uncertainty			+/-9.34							
Cerium-139			U	-0.519	pCi/L						
	Uncertainty			+/-2.51							
Cerium-141			U	-0.95	pCi/L						
	Uncertainty			+/-4.25							
Cerium-144			U	7.90	pCi/L						
	Uncertainty			+/-16.5							
Cesium-134			U	2.54	pCi/L						
	Uncertainty			+/-3.62							
Cesium-136			U	7.51	pCi/L						
	Uncertainty			+/-4.76							
Cesium-137			U	1.93	pCi/L						
	Uncertainty			+/-3.48							
Chromium-51			U	-7.02	pCi/L						
	Uncertainty			+/-26.7							
Cobalt-56			U	-0.926	pCi/L						
	Uncertainty			+/-3.46							
Cobalt-57			U	0.434	pCi/L						
	Uncertainty			+/-2.07							
Cobalt-58			U	1.30	pCi/L						
	Uncertainty			+/-3.18							
Cobalt-60			U	-0.598	pCi/L						
	Uncertainty			+/-3.66							
Europium-152			U	7.09	pCi/L						
	Uncertainty			+/-8.95							
Europium-154			U	-0.933	pCi/L						
	Uncertainty			+/-12.6							
Europium-155			U	4.27	pCi/L						
	Uncertainty			+/-8.69							
Iridium-192			U	0.0307	pCi/L						
	Uncertainty			+/-3.03							
Iron-59			U	-7.29	pCi/L						
	Uncertainty			+/-7.47							
Lead-210			U	143	pCi/L						
	Uncertainty			+/-316							
Lead-212			U	0.0874	pCi/L						
	Uncertainty			+/-8.87							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1474077										
Lead-214			U	1.54	pCi/L						
	Uncertainty			+/-8.20							
Manganese-54			U	-1.59	pCi/L				MJH1	04/29/15	10:07
	Uncertainty			+/-3.94							
Mercury-203			U	0.295	pCi/L						
	Uncertainty			+/-2.95							
Neodymium-147			U	-9.87	pCi/L						
	Uncertainty			+/-24.3							
Neptunium-239			U	10.9	pCi/L						
	Uncertainty			+/-24.4							
Niobium-94			U	-0.856	pCi/L						
	Uncertainty			+/-3.40							
Niobium-95			U	1.40	pCi/L						
	Uncertainty			+/-3.16							
Potassium-40			U	-36	pCi/L						
	Uncertainty			+/-50.4							
Promethium-144			U	0.273	pCi/L						
	Uncertainty			+/-3.54							
Promethium-146			U	2.45	pCi/L						
	Uncertainty			+/-3.83							
Radium-228			U	1.34	pCi/L						
	Uncertainty			+/-18.2							
Ruthenium-106			U	-9.99	pCi/L						
	Uncertainty			+/-27.5							
Silver-110m			U	-4.69	pCi/L						
	Uncertainty			+/-3.01							
Sodium-22			U	-0.375	pCi/L						
	Uncertainty			+/-4.40							
Thallium-208			U	0.571	pCi/L						
	Uncertainty			+/-4.33							
Thorium-230			U	-159	pCi/L						
	Uncertainty			+/-826							
Thorium-234			U	0.673	pCi/L						
	Uncertainty			+/-130							
Tin-113			U	2.07	pCi/L						
	Uncertainty			+/-3.77							
Uranium-235			U	12.5	pCi/L						
	Uncertainty			+/-21.7							
Uranium-238			U	0.673	pCi/L						
	Uncertainty			+/-130							
Yttrium-88			U	0.499	pCi/L						
	Uncertainty			+/-2.99							
Zinc-65			U	3.57	pCi/L						
	Uncertainty			+/-7.58							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474077										
Zirconium-95			U	-2.05	pCi/L						
	Uncertainty			+/-5.98							
Batch	1474078										
QC1203306680 371595021 DUP											
Actinium-228	U	-14.7	U	13.4	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-14.1		+/-18.1							
Americium-241	U	13.0	U	7.09	pCi/L	N/A		N/A			
	Uncertainty	+/-12.2		+/-36.4							
Antimony-124	U	8.18	U	7.72	pCi/L	N/A		N/A			
	Uncertainty	+/-5.00		+/-10.8							
Antimony-125	U	1.95	U	9.84	pCi/L	N/A		N/A			
	Uncertainty	+/-8.06		+/-11.6							
Barium-133	U	-0.197	U	-0.995	pCi/L	N/A		N/A			
	Uncertainty	+/-5.48		+/-9.59							
Barium-140	U	6.15	U	-0.195	pCi/L	N/A		N/A			
	Uncertainty	+/-21.4		+/-36.1							
Beryllium-7	U	2.04	U	15.1	pCi/L	N/A		N/A			
	Uncertainty	+/-27.6		+/-39.1							
Bismuth-212	U	36.5	U	45.2	pCi/L	N/A		N/A			
	Uncertainty	+/-29.4		+/-64.8							
Bismuth-214		13.7	U	1.14	pCi/L	24.9		(0% - 100%)			
	Uncertainty	+/-10.6		+/-10.3							
Cerium-139	U	1.72	U	0.107	pCi/L	N/A		N/A			
	Uncertainty	+/-2.56		+/-4.04							
Cerium-141	U	-1.24	U	4.28	pCi/L	N/A		N/A			
	Uncertainty	+/-5.72		+/-7.90							
Cerium-144	U	-5.43	U	-10.2	pCi/L	N/A		N/A			
	Uncertainty	+/-19.2		+/-24.7							
Cesium-134	U	0.635	U	-8.11	pCi/L	N/A		N/A			
	Uncertainty	+/-3.30		+/-5.37							
Cesium-136	U	2.97	U	-0.944	pCi/L	N/A		N/A			
	Uncertainty	+/-8.30		+/-12.8							
Cesium-137	U	0.781	U	-0.743	pCi/L	N/A		N/A			
	Uncertainty	+/-3.19		+/-4.31							
Chromium-51	U	-29.9	U	-12.1	pCi/L	N/A		N/A			
	Uncertainty	+/-37.6		+/-45.3							
Cobalt-56	U	-2.76	U	-0.103	pCi/L	N/A		N/A			
	Uncertainty	+/-4.12		+/-4.71							
Cobalt-57	U	-1.28	U	-1.87	pCi/L	N/A		N/A			
	Uncertainty	+/-2.32		+/-3.19							
Cobalt-58	U	1.26	U	-0.641	pCi/L	N/A		N/A			
	Uncertainty	+/-3.08		+/-4.45							
Cobalt-60	U	-2.16	U	0.884	pCi/L	N/A		N/A			
	Uncertainty	+/-3.02		+/-4.02							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Europium-152	U	6.92	U	-9.58	pCi/L	N/A		N/A			
	Uncertainty	+/-8.39		+/-14.0							
Europium-154	U	-1.92	U	-7.06	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-8.19		+/-12.1							
Europium-155	U	2.02	U	5.45	pCi/L	N/A		N/A			
	Uncertainty	+/-8.73		+/-12.3							
Iridium-192	U	0.629	U	-4.4	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-4.16							
Iron-59	U	4.26	U	-2.76	pCi/L	N/A		N/A			
	Uncertainty	+/-7.11		+/-9.49							
Lead-210	U	214	U	-131	pCi/L	N/A		N/A			
	Uncertainty	+/-394		+/-646							
Lead-212	U	6.57	U	12.2	pCi/L	N/A		N/A			
	Uncertainty	+/-8.39		+/-13.6							
Lead-214	U	11.3	U	0.397	pCi/L	N/A		N/A			
	Uncertainty	+/-10.6		+/-15.8							
Manganese-54	U	0.0176	U	4.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.95		+/-5.04							
Mercury-203	U	-0.0192	U	-4.15	pCi/L	N/A		N/A			
	Uncertainty	+/-3.46		+/-5.36							
Neodymium-147	U	-18.8	U	-33.1	pCi/L	N/A		N/A			
	Uncertainty	+/-45.9		+/-83.7							
Neptunium-239	U	-1.87	U	-6.03	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-33.1							
Niobium-94	U	2.10	U	-5.02	pCi/L	N/A		N/A			
	Uncertainty	+/-2.99		+/-3.96							
Niobium-95	U	-0.869	U	4.56	pCi/L	N/A		N/A			
	Uncertainty	+/-4.00		+/-4.45							
Potassium-40	U	43.9	U	-66.4	pCi/L	N/A		N/A			
	Uncertainty	+/-54.4		+/-55.0							
Promethium-144	U	0.360	U	4.95	pCi/L	N/A		N/A			
	Uncertainty	+/-3.15		+/-4.19							
Promethium-146	U	2.54	U	-2.41	pCi/L	N/A		N/A			
	Uncertainty	+/-4.07		+/-5.13							
Radium-228	U	-14.7	U	13.4	pCi/L	N/A		N/A			
	Uncertainty	+/-14.1		+/-18.1							
Ruthenium-106	U	17.2	U	38.8	pCi/L	N/A		N/A			
	Uncertainty	+/-31.4		+/-37.2							
Silver-110m	U	-1.4	U	4.35	pCi/L	N/A		N/A			
	Uncertainty	+/-2.95		+/-4.23							
Sodium-22	U	-1.17	U	-2.16	pCi/L	N/A		N/A			
	Uncertainty	+/-2.97		+/-4.25							
Thallium-208	U	3.56	U	3.69	pCi/L	N/A		N/A			
	Uncertainty	+/-6.34		+/-5.56							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Thorium-230	U	1330	U	1150	pCi/L	N/A		N/A			
	Uncertainty	+/-1250		+/-1640							
Thorium-234	U	42.6	U	42.0	pCi/L	N/A		N/A	MJH1	04/30/15	07:45
	Uncertainty	+/-168		+/-256							
Tin-113	U	0.830	U	-3.78	pCi/L	N/A		N/A			
	Uncertainty	+/-3.89		+/-5.45							
Uranium-235	U	-9.24	U	-13	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-28.5							
Uranium-238	U	42.6	U	42.0	pCi/L	N/A		N/A			
	Uncertainty	+/-168		+/-256							
Yttrium-88	U	0.208	U	-0.296	pCi/L	N/A		N/A			
	Uncertainty	+/-3.73		+/-4.93							
Zinc-65	U	-1.65	U	1.55	pCi/L	N/A		N/A			
	Uncertainty	+/-6.47		+/-9.33							
Zirconium-95	U	-4.45	U	9.75	pCi/L	N/A		N/A			
	Uncertainty	+/-5.89		+/-10.9							
QC1203306681	LCS										
Actinium-228			U	-463	pCi/L					04/29/15	10:54
	Uncertainty			+/-981							
Americium-241	1.10E+05			1.25E+05	pCi/L		113	(75%-125%)			
	Uncertainty			+/-3010							
Antimony-124			U	-74.2	pCi/L						
	Uncertainty			+/-180							
Antimony-125			U	366	pCi/L						
	Uncertainty			+/-532							
Barium-133			U	-10.8	pCi/L						
	Uncertainty			+/-213							
Barium-140			U	-234	pCi/L						
	Uncertainty			+/-705							
Beryllium-7			U	-704	pCi/L						
	Uncertainty			+/-1670							
Bismuth-212			U	-861	pCi/L						
	Uncertainty			+/-2560							
Bismuth-214			U	141	pCi/L						
	Uncertainty			+/-371							
Cerium-139			U	117	pCi/L						
	Uncertainty			+/-137							
Cerium-141			U	83.4	pCi/L						
	Uncertainty			+/-205							
Cerium-144			U	-151	pCi/L						
	Uncertainty			+/-984							
Cesium-134			U	-31.1	pCi/L						
	Uncertainty			+/-258							
Cesium-136			U	-20	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
				+/-357							
Cesium-137	44200			46700	pCi/L		106	(75%-125%)	MJH1	04/29/15	10:54
	Uncertainty			+/-842							
Chromium-51			U	-14.7	pCi/L						
	Uncertainty			+/-1340							
Cobalt-56			U	-132	pCi/L						
	Uncertainty			+/-223							
Cobalt-57				2120	pCi/L						
	Uncertainty			+/-212							
Cobalt-58			U	142	pCi/L						
	Uncertainty			+/-199							
Cobalt-60	50400			52900	pCi/L		105	(75%-125%)			
	Uncertainty			+/-1010							
Europium-152			U	-44.3	pCi/L						
	Uncertainty			+/-554							
Europium-154			U	130	pCi/L						
	Uncertainty			+/-355							
Europium-155			U	-260	pCi/L						
	Uncertainty			+/-527							
Iridium-192			U	64.2	pCi/L						
	Uncertainty			+/-153							
Iron-59			U	-58.8	pCi/L						
	Uncertainty			+/-485							
Lead-210				1.47E+06	pCi/L						
	Uncertainty			+/-73400							
Lead-212			U	466	pCi/L						
	Uncertainty			+/-444							
Lead-214			U	298	pCi/L						
	Uncertainty			+/-391							
Manganese-54			U	130	pCi/L						
	Uncertainty			+/-207							
Mercury-203			U	-46.5	pCi/L						
	Uncertainty			+/-163							
Neodymium-147			U	494	pCi/L						
	Uncertainty			+/-1320							
Neptunium-239			U	-116	pCi/L						
	Uncertainty			+/-1420							
Niobium-94			U	48.9	pCi/L						
	Uncertainty			+/-165							
Niobium-95			U	-53.4	pCi/L						
	Uncertainty			+/-192							
Potassium-40			U	-630	pCi/L						
	Uncertainty			+/-916							

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Promethium-144			U	-40.2	pCi/L						
	Uncertainty			+/-165							
Promethium-146			U	-28.4	pCi/L				MJH1	04/29/15	10:54
	Uncertainty			+/-259							
Radium-228			U	-463	pCi/L						
	Uncertainty			+/-981							
Ruthenium-106			U	-2100	pCi/L						
	Uncertainty			+/-1580							
Silver-110m				1490	pCi/L						
	Uncertainty			+/-249							
Sodium-22			U	14.0	pCi/L						
	Uncertainty			+/-126							
Thallium-208			U	4.08	pCi/L						
	Uncertainty			+/-178							
Thorium-230			U	95100	pCi/L						
	Uncertainty			+/-68500							
Thorium-234			U	-13900	pCi/L						
	Uncertainty			+/-8220							
Tin-113			U	280	pCi/L						
	Uncertainty			+/-226							
Uranium-235			U	760	pCi/L						
	Uncertainty			+/-864							
Uranium-238			U	-13900	pCi/L						
	Uncertainty			+/-8220							
Yttrium-88			U	141	pCi/L						
	Uncertainty			+/-109							
Zinc-65				6190	pCi/L						
	Uncertainty			+/-842							
Zirconium-95			U	22.9	pCi/L						
	Uncertainty			+/-343							
QC1203306679	MB										
Actinium-228			U	17.0	pCi/L					04/30/15	07:38
	Uncertainty			+/-29.7							
Americium-241			U	7.49	pCi/L						
	Uncertainty			+/-26.6							
Antimony-124			U	2.38	pCi/L						
	Uncertainty			+/-9.75							
Antimony-125			U	3.90	pCi/L						
	Uncertainty			+/-10.4							
Barium-133			U	-1.27	pCi/L						
	Uncertainty			+/-4.27							
Barium-140			U	-4.09	pCi/L						
	Uncertainty			+/-17.4							
Beryllium-7			U	16.7	pCi/L						
	Uncertainty										

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Bismuth-212				+/-30.2							
			U	15.0	pCi/L				MJH1	04/30/15	07:38
Bismuth-214	Uncertainty			+/-52.8							
			U	-4.14	pCi/L						
Cerium-139	Uncertainty			+/-12.1							
			U	0.871	pCi/L						
Cerium-141	Uncertainty			+/-3.15							
			U	1.13	pCi/L						
Cerium-144	Uncertainty			+/-6.50							
			U	2.12	pCi/L						
Cesium-134	Uncertainty			+/-20.7							
			U	1.07	pCi/L						
Cesium-136	Uncertainty			+/-4.15							
			U	5.77	pCi/L						
Cesium-137	Uncertainty			+/-5.30							
			U	4.62	pCi/L						
Chromium-51	Uncertainty			+/-3.46							
			U	16.0	pCi/L						
Cobalt-56	Uncertainty			+/-34.8							
			U	-0.448	pCi/L						
Cobalt-57	Uncertainty			+/-3.65							
			U	-0.958	pCi/L						
Cobalt-58	Uncertainty			+/-2.79							
			U	-0.633	pCi/L						
Cobalt-60	Uncertainty			+/-4.60							
			U	-0.62	pCi/L						
Europium-152	Uncertainty			+/-3.71							
			U	3.84	pCi/L						
Europium-154	Uncertainty			+/-10.8							
			U	-0.843	pCi/L						
Europium-155	Uncertainty			+/-10.9							
			U	-8.42	pCi/L						
Iridium-192	Uncertainty			+/-11.1							
			U	-0.584	pCi/L						
Iron-59	Uncertainty			+/-3.47							
			U	1.52	pCi/L						
Lead-210	Uncertainty			+/-7.37							
			U	950	pCi/L						
Lead-212	Uncertainty			+/-1140							
			U	0.268	pCi/L						
Lead-214	Uncertainty			+/-7.63							
			U	-0.0138	pCi/L						
	Uncertainty			+/-7.82							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1474078										
Manganese-54			U	-1.37	pCi/L						
	Uncertainty			+/-4.09							
Mercury-203			U	-0.176	pCi/L				MJH1	04/30/15	07:38
	Uncertainty			+/-3.22							
Neodymium-147			U	-5.1	pCi/L						
	Uncertainty			+/-31.9							
Neptunium-239			U	-23.9	pCi/L						
	Uncertainty			+/-28.9							
Niobium-94			U	4.35	pCi/L						
	Uncertainty			+/-4.16							
Niobium-95			U	1.47	pCi/L						
	Uncertainty			+/-3.64							
Potassium-40			U	-46.7	pCi/L						
	Uncertainty			+/-55.7							
Promethium-144			U	0.399	pCi/L						
	Uncertainty			+/-4.48							
Promethium-146			U	-2.26	pCi/L						
	Uncertainty			+/-4.66							
Radium-228			U	17.0	pCi/L						
	Uncertainty			+/-29.7							
Ruthenium-106			U	1.65	pCi/L						
	Uncertainty			+/-35.2							
Silver-110m			U	-1.94	pCi/L						
	Uncertainty			+/-3.55							
Sodium-22			U	0.423	pCi/L						
	Uncertainty			+/-3.71							
Thallium-208			U	3.81	pCi/L						
	Uncertainty			+/-5.25							
Thorium-230			U	-1200	pCi/L						
	Uncertainty			+/-1580							
Thorium-234			U	-76.8	pCi/L						
	Uncertainty			+/-256							
Tin-113			U	-0.675	pCi/L						
	Uncertainty			+/-4.45							
Uranium-235			U	2.11	pCi/L						
	Uncertainty			+/-40.3							
Uranium-238			U	-76.8	pCi/L						
	Uncertainty			+/-256							
Yttrium-88			U	-3.54	pCi/L						
	Uncertainty			+/-4.17							
Zinc-65			U	-4.68	pCi/L						
	Uncertainty			+/-8.46							
Zirconium-95			U	-4.34	pCi/L						
	Uncertainty			+/-6.62							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1475946										
QC1203311373	371595003	DUP									
Alpha	U	4.02		4.64	pCi/L	14.3		(0% - 100%)	KXB2	05/17/15	13:02
	Uncertainty	+/-3.23		+/-2.70							
Beta		109		113	pCi/L	2.98		(0%-20%)			
	Uncertainty	+/-4.14		+/-3.98							
QC1203311374	LCS										
Alpha	122			110	pCi/L		90.9	(75%-125%)		05/17/15	13:02
	Uncertainty			+/-11.7							
Beta	472			490	pCi/L		104	(75%-125%)			
	Uncertainty			+/-17.6							
QC1203311372	MB										
Alpha			U	-0.343	pCi/L					05/19/15	10:59
	Uncertainty			+/-1.13							
Beta			U	-1.84	pCi/L						
	Uncertainty			+/-1.53							
Batch	1475947										
QC1203311376	371595017	DUP									
Alpha	U	3.15	U	1.48	pCi/L	N/A		N/A	KXB2	05/17/15	13:26
	Uncertainty	+/-5.29		+/-3.37							
Beta		33.9		35.2	pCi/L	3.53		(0%-20%)			
	Uncertainty	+/-3.73		+/-3.48							
QC1203311377	LCS										
Alpha	122			133	pCi/L		109	(75%-125%)		05/16/15	13:35
	Uncertainty			+/-12.8							
Beta	472			517	pCi/L		110	(75%-125%)			
	Uncertainty			+/-18.7							
QC1203311375	MB										
Alpha			U	-0.231	pCi/L					05/16/15	13:42
	Uncertainty			+/-1.50							
Beta			U	-0.574	pCi/L						
	Uncertainty			+/-2.46							
<b>Rad Liquid Scintillation</b>											
Batch	1475754										
QC1203310910	371595001	DUP									
Technetium-99	U	-53.1	U	-117	pCi/L	N/A		N/AMYM1		05/18/15	15:49
	Uncertainty	+/-116		+/-116							
QC1203310911	LCS										
Technetium-99	4300			3660	pCi/L		85	(75%-125%)		05/18/15	16:06
	Uncertainty			+/-228							
QC1203310909	MB										
Technetium-99			U	-129	pCi/L					05/18/15	15:32
	Uncertainty			+/-122							
Batch	1475755										
QC1203310913	371595015	DUP									
Technetium-99	U	38.7	U	-80.1	pCi/L	N/A		N/AMYM1		05/18/15	14:20
	Uncertainty	+/-98.8		+/-92.1							

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## QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1475755										
QC1203310914	LCS										
Technetium-99	4300			4380	pCi/L		102	(75%-125%)	MYM1	05/18/15	14:36
	Uncertainty			+/-239							
QC1203310912	MB										
Technetium-99			U	-51.3	pCi/L					05/18/15	14:03
	Uncertainty			+/-96.1							

### 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 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, 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

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## QC Summary

Workorder: 371595

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 19 May 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

August 18, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

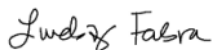
Re: Ground Water Well Liquid Analysis  
Work Order: 377742

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,



Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.: ROF-06-007-1  
 REVISION: 8  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06-10-13

VENDOR: General Engineering Laboratories (GEL)Month: JulyYear: 2015

From: Westinghouse Electric Company  
 5801 Bluff Rd  
 Hopkins, S.C.29061

377742

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/10/15 09:32	1000	X	X	X		X	REC
WELL	#3A	7/16/15 10:35	1000	X	X	X		X	REC
WELL	#7	7/13/15 11:32	1000	X	X	X		X	REC
WELL	#10	7/13/15 14:05	1000	X	X	X		X	REC
WELL	#13R	7/13/15 11:05	1000	X	X	X		X	REC
WELL	#14	7/10/15 14:22	1000	X	X	X		X	REC
WELL	#15	7/10/15 12:12	1000	X	X	X		X	REC
WELL	#16	7/10/15 14:40	1000	X	X	X		X	REC
WELL	#17	7/15/15 09:35	1000	X	X	X		X	REC
WELL	#18	7/13/15 10:10	1000	X	X	X		X	REC
WELL	#20	7/16/15 09:34	1000	X	X	X		X	REC
WELL	#22	7/13/15 09:51	1000	X	X	X		X	REC
WELL	#23R	7/10/15 13:51	1000	X	X	X		X	REC
WELL	#24	7/10/15 11:18	1000	X	X	X		X	REC
WELL	#26	7/10/15 10:10	1000	X	X	X		X	REC
WELL	#27	7/16/15 09:55	1000	X	X	X		X	REC
WELL	#28	7/13/15 10:38	1000	X	X	X		X	REC
WELL	#29	7/13/15 09:09	1000	X	X	X		X	REC
WELL	#30	7/13/15 09:30	1000	X	X	X		X	REC
WELL	#32	7/13/15 14:25	1000	X	X	X		X	REC
WELL	#33	7/10/15 08:46	1000	X	X	X		X	REC
WELL	#38	7/13/15 08:45	1000	X	X	X		X	REC
WELL	#39	7/15/15 10:09	1000	X	X	X		X	REC
WELL	#41R	7/10/15 09:53	1000	X	X	X		X	REC
WELL	#43	7/15/15 10:31	1000	X	X	X		X	REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 7/22/15

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Electronically approved records are authenticated in the electronic document management system

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## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <b>WNVC</b>		SDG/AR/COC/Work Order: <b>377742</b>	
Received By: <b>ELW</b>		Date Received: <b>7/22/15</b>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <b>0cpm</b>	
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		23°C Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <b>1304629606</b>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?		<input checked="" type="checkbox"/>		
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <u>Courier</u> Other  <b>GEL</b>

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials **JHF**Date **07/22/15**Page **1** of **1**

GL-CHL-SR-001 Rev 1

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 377742 GEL Work Order: 377742

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377742001  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:32  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.67	+/-15.4	25.4		pCi/L		MJH1	08/04/15	0853 1495870	1
Americium-241	U	18.2	+/-21.9	38.0		pCi/L					
Antimony-124	U	-1.12	+/-9.35	18.0		pCi/L					
Antimony-125	U	-7.68	+/-8.24	13.6		pCi/L					
Barium-133	U	0.346	+/-4.41	7.09		pCi/L					
Barium-140	U	-9.65	+/-42.1	73.8		pCi/L					
Beryllium-7	U	-21.9	+/-35.8	60.6		pCi/L					
Bismuth-212	U	46.1	+/-45.0	92.2		pCi/L					
Bismuth-214	UI	0.00	+/-11.9	19.3		pCi/L					
Cerium-139	U	-0.638	+/-3.02	5.15		pCi/L					
Cerium-141	U	-1.22	+/-7.62	13.1		pCi/L					
Cerium-144	U	3.42	+/-18.9	33.5		pCi/L					
Cesium-134	U	3.90	+/-5.04	7.74		pCi/L					
Cesium-136	U	8.40	+/-15.4	27.9		pCi/L					
Cesium-137	UI	0.00	+/-4.52	5.41	10.0	pCi/L					
Chromium-51	U	-14.6	+/-47.4	84.0		pCi/L					
Cobalt-56	U	-0.251	+/-3.78	7.01		pCi/L					
Cobalt-57	U	1.17	+/-2.55	4.60		pCi/L					
Cobalt-58	U	-2.78	+/-3.85	6.61		pCi/L					
Cobalt-60	U	-0.0457	+/-3.10	6.08		pCi/L					
Europium-152	U	-3.76	+/-9.42	16.6		pCi/L					
Europium-154	U	8.54	+/-9.53	20.1		pCi/L					
Europium-155	U	-1.86	+/-10.4	18.2		pCi/L					
Iridium-192	U	1.11	+/-3.85	7.10		pCi/L					
Iron-59	U	-0.275	+/-9.29	17.1		pCi/L					
Lead-210	U	609	+/-724	1380		pCi/L					
Lead-212	U	5.81	+/-8.84	11.4		pCi/L					
Lead-214	U	9.90	+/-12.9	11.5		pCi/L					
Manganese-54	U	0.354	+/-3.21	6.07		pCi/L					
Mercury-203	U	-1.38	+/-3.99	7.12		pCi/L					
Neodymium-147	U	52.0	+/-98.3	185		pCi/L					
Neptunium-239	U	17.1	+/-26.3	48.0		pCi/L					
Niobium-94	U	-2.65	+/-3.09	5.29		pCi/L					
Niobium-95	U	-1.77	+/-5.77	8.74		pCi/L					
Potassium-40	U	16.9	+/-41.1	58.6		pCi/L					
Promethium-144	U	-0.167	+/-3.49	6.44		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377742001

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.07	+/-3.82	7.23	pCi/L
Radium-228	U	-5.67	+/-15.4	25.4	pCi/L
Ruthenium-106	U	-32.3	+/-30.1	47.1	pCi/L
Silver-110m	U	0.333	+/-3.01	5.11	pCi/L
Sodium-22	U	2.97	+/-3.37	7.12	pCi/L
Thallium-208	U	0.537	+/-5.66	5.14	pCi/L
Thorium-230	U	1110	+/-1700	2360	pCi/L
Thorium-234		311	+/-263	288	pCi/L
Tin-113	U	0.995	+/-4.39	8.08	pCi/L
Uranium-235	U	-3.7	+/-24.9	36.7	pCi/L
Uranium-238		311	+/-263	288	pCi/L
Yttrium-88	U	-0.603	+/-4.05	7.73	pCi/L
Zinc-65	U	-4.25	+/-7.59	13.0	pCi/L
Zirconium-95	U	-5.26	+/-7.27	10.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	-0.827	+/-1.50	4.35	5.00	pCi/L	KXB2	08/13/15	1511	1497329	2
Beta		6.58	+/-3.44	5.10	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-17.6	+/-125	219	300	pCi/L	MYM1	08/11/15	2026	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 377742002  
Matrix: Ground Water  
Collect Date: 16-JUL-15 10:35  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.9	+/-13.9	28.3		pCi/L		MJH1	08/04/15	0854 1495870	1
Americium-241	U	24.5	+/-27.7	47.7		pCi/L					
Antimony-124	U	0.536	+/-8.17	16.8		pCi/L					
Antimony-125	U	2.91	+/-9.33	17.2		pCi/L					
Barium-133	U	1.49	+/-5.05	8.20		pCi/L					
Barium-140	U	8.98	+/-30.4	56.6		pCi/L					
Beryllium-7	U	12.2	+/-38.6	70.4		pCi/L					
Bismuth-212	U	27.6	+/-43.3	87.7		pCi/L					
Bismuth-214	U	11.9	+/-13.7	12.7		pCi/L					
Cerium-139	U	0.574	+/-3.41	5.86		pCi/L					
Cerium-141	U	2.80	+/-8.28	13.0		pCi/L					
Cerium-144	U	-13.1	+/-22.7	37.5		pCi/L					
Cesium-134	U	4.77	+/-2.64	6.93		pCi/L					
Cesium-136	U	-4.7	+/-11.4	20.1		pCi/L					
Cesium-137	U	-3.74	+/-3.83	6.46	10.0	pCi/L					
Chromium-51	U	15.5	+/-43.5	80.2		pCi/L					
Cobalt-56	U	-1.67	+/-3.73	6.60		pCi/L					
Cobalt-57	U	2.50	+/-2.88	5.23		pCi/L					
Cobalt-58	U	-3.09	+/-3.65	6.11		pCi/L					
Cobalt-60	U	0.470	+/-3.63	7.26		pCi/L					
Europium-152	U	-13.2	+/-10.1	16.2		pCi/L					
Europium-154	U	3.69	+/-9.93	18.7		pCi/L					
Europium-155	U	2.20	+/-12.4	20.8		pCi/L					
Iridium-192	U	-2.87	+/-3.86	6.56		pCi/L					
Iron-59	U	-6.56	+/-9.94	16.7		pCi/L					
Lead-210	U	-1060	+/-1290	1900		pCi/L					
Lead-212	U	3.47	+/-9.57	13.0		pCi/L					
Lead-214	U	9.91	+/-13.7	14.1		pCi/L					
Manganese-54	U	1.92	+/-3.37	6.73		pCi/L					
Mercury-203	U	1.72	+/-4.19	7.77		pCi/L					
Neodymium-147	U	44.5	+/-71.0	135		pCi/L					
Neptunium-239	U	0.361	+/-27.7	48.1		pCi/L					
Niobium-94	U	1.15	+/-3.38	6.48		pCi/L					
Niobium-95	U	0.300	+/-3.92	7.40		pCi/L					
Potassium-40	U	-66	+/-54.6	89.1		pCi/L					
Promethium-144	U	-0.197	+/-3.24	6.02		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 377742002

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.9	+/-4.21	7.21	pCi/L
Radium-228	U	12.9	+/-13.9	28.3	pCi/L
Ruthenium-106	U	12.3	+/-29.5	57.9	pCi/L
Silver-110m	U	1.77	+/-3.16	6.30	pCi/L
Sodium-22	U	1.37	+/-3.53	6.66	pCi/L
Thallium-208	U	0.624	+/-4.57	7.26	pCi/L
Thorium-230	U	1200	+/-1660	2930	pCi/L
Thorium-234	U	106	+/-317	430	pCi/L
Tin-113	U	1.78	+/-5.17	9.45	pCi/L
Uranium-235	U	1.54	+/-28.1	39.9	pCi/L
Uranium-238	U	106	+/-317	430	pCi/L
Yttrium-88	U	2.20	+/-4.73	9.95	pCi/L
Zinc-65	U	-4.78	+/-7.24	12.1	pCi/L
Zirconium-95	U	-1.7	+/-7.70	14.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.24	+/-1.54	2.28	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta	U	2.58	+/-2.30	3.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-1.71	+/-125	218	300	pCi/L	MYM1	08/11/15	2043	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377742003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 11:32		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.24	+/-16.4	26.9		pCi/L		MJH1	08/04/15	0916 1495870	1
Americium-241	U	11.3	+/-14.2	23.9		pCi/L					
Antimony-124	U	-5.39	+/-7.47	12.8		pCi/L					
Antimony-125	U	5.02	+/-7.86	14.9		pCi/L					
Barium-133	U	-7.2	+/-5.60	6.50		pCi/L					
Barium-140	U	12.7	+/-37.3	68.1		pCi/L					
Beryllium-7	U	0.0597	+/-36.1	56.4		pCi/L					
Bismuth-212	U	-23.9	+/-55.9	81.3		pCi/L					
Bismuth-214	U	11.6	+/-9.71	15.2		pCi/L					
Cerium-139	U	-1.14	+/-2.89	4.81		pCi/L					
Cerium-141	U	9.73	+/-9.68	10.8		pCi/L					
Cerium-144	U	7.28	+/-18.2	32.2		pCi/L					
Cesium-134	U	1.50	+/-3.69	6.60		pCi/L					
Cesium-136	U	10.8	+/-13.5	27.0		pCi/L					
Cesium-137	U	-3.71	+/-4.13	5.40	10.0	pCi/L					
Chromium-51	U	44.2	+/-37.1	66.8		pCi/L					
Cobalt-56	U	0.324	+/-3.85	7.17		pCi/L					
Cobalt-57	U	0.676	+/-2.39	4.20		pCi/L					
Cobalt-58	U	-0.0417	+/-3.45	6.11		pCi/L					
Cobalt-60	U	0.902	+/-3.49	5.97		pCi/L					
Europium-152	U	-2.92	+/-9.11	16.0		pCi/L					
Europium-154	U	2.68	+/-8.49	16.7		pCi/L					
Europium-155	U	1.87	+/-9.46	16.6		pCi/L					
Iridium-192	U	1.03	+/-3.53	5.79		pCi/L					
Iron-59	U	-4.5	+/-8.75	15.1		pCi/L					
Lead-210	U	-283	+/-331	477		pCi/L					
Lead-212	U	9.32	+/-8.57	11.2		pCi/L					
Lead-214		17.9	+/-10.0	15.8		pCi/L					
Manganese-54	U	-2.77	+/-3.40	5.77		pCi/L					
Mercury-203	U	-0.468	+/-3.79	6.79		pCi/L					
Neodymium-147	U	-30.7	+/-78.6	135		pCi/L					
Neptunium-239	U	-5.96	+/-24.8	42.3		pCi/L					
Niobium-94	U	0.797	+/-3.10	5.86		pCi/L					
Niobium-95	U	-0.674	+/-3.39	6.21		pCi/L					
Potassium-40	U	12.2	+/-61.5	49.0		pCi/L					
Promethium-144	U	1.40	+/-3.53	6.69		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 7  
Sample ID: 377742003  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.81	+/-4.06	7.49	pCi/L
Radium-228	U	7.24	+/-16.4	26.9	pCi/L
Ruthenium-106	U	30.0	+/-32.2	61.3	pCi/L
Silver-110m	UI	0.00	+/-3.58	5.56	pCi/L
Sodium-22	U	0.950	+/-3.01	5.92	pCi/L
Thallium-208	U	3.28	+/-5.90	6.21	pCi/L
Thorium-230	U	525	+/-1360	1630	pCi/L
Thorium-234	U	-55.3	+/-149	224	pCi/L
Tin-113	U	0.212	+/-4.40	7.90	pCi/L
Uranium-235	UI	0.00	+/-26.7	25.7	pCi/L
Uranium-238	U	-55.3	+/-149	224	pCi/L
Yttrium-88	U	-4.4	+/-4.25	6.70	pCi/L
Zinc-65	U	-2.54	+/-6.76	11.9	pCi/L
Zirconium-95	U	6.79	+/-7.12	14.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha		17.5	+/-9.58	10.5	5.00	pCi/L	KXB2	08/13/15	1511	1497329	2
Beta		102	+/-12.3	9.90	5.00	pCi/L					
Alpha	U	5.46	+/-3.66	5.80	5.00	pCi/L	KXB2	08/14/15	1922	1497329	3
Beta		119	+/-4.48	3.06	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	168	+/-139	230	300	pCi/L	MYM1	08/13/15	0048	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377742003	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 377742004  
Matrix: Ground Water  
Collect Date: 13-JUL-15 14:05  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-0.173	+/-15.6	25.9		pCi/L		MJH1	08/04/15	1138	1495870	1
Americium-241	U	-1.04	+/-10.8	17.1		pCi/L						
Antimony-124	U	0.366	+/-9.25	17.6		pCi/L						
Antimony-125	U	-1.7	+/-8.17	14.6		pCi/L						
Barium-133	U	0.913	+/-4.25	6.90		pCi/L						
Barium-140	U	-22.2	+/-36.6	63.0		pCi/L						
Beryllium-7	U	-13.5	+/-34.6	60.8		pCi/L						
Bismuth-212	U	15.7	+/-47.8	88.2		pCi/L						
Bismuth-214		15.1	+/-11.9	12.0		pCi/L						
Cerium-139	U	-1.18	+/-3.03	5.20		pCi/L						
Cerium-141	U	-8.78	+/-9.16	13.0		pCi/L						
Cerium-144	U	21.0	+/-19.5	36.0		pCi/L						
Cesium-134	U	2.27	+/-3.46	6.66		pCi/L						
Cesium-136	U	-9.28	+/-12.6	21.7		pCi/L						
Cesium-137	U	3.44	+/-7.57	6.40	10.0	pCi/L						
Chromium-51	U	48.4	+/-50.6	70.6		pCi/L						
Cobalt-56	U	-1.64	+/-3.92	6.70		pCi/L						
Cobalt-57	U	-1.39	+/-2.54	4.37		pCi/L						
Cobalt-58	U	-1.95	+/-3.55	6.01		pCi/L						
Cobalt-60	U	-1.33	+/-3.87	6.40		pCi/L						
Europium-152	U	0.161	+/-9.51	17.3		pCi/L						
Europium-154	U	-3.94	+/-10.9	17.8		pCi/L						
Europium-155	U	6.16	+/-11.0	17.8		pCi/L						
Iridium-192	U	-2.43	+/-4.62	6.25		pCi/L						
Iron-59	U	-0.808	+/-9.06	16.7		pCi/L						
Lead-210	U	15.5	+/-301	315		pCi/L						
Lead-212	U	12.3	+/-10.9	12.4		pCi/L						
Lead-214	U	14.7	+/-10.7	15.4		pCi/L						
Manganese-54	U	-3.15	+/-3.32	5.32		pCi/L						
Mercury-203	U	-1.45	+/-4.25	7.18		pCi/L						
Neodymium-147	U	17.9	+/-88.0	157		pCi/L						
Neptunium-239	U	-12.5	+/-26.2	45.3		pCi/L						
Niobium-94	U	-0.727	+/-3.25	5.69		pCi/L						
Niobium-95	U	0.921	+/-3.73	6.88		pCi/L						
Potassium-40	U	32.7	+/-59.9	60.1		pCi/L						
Promethium-144	U	-0.526	+/-3.64	6.40		pCi/L						



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10 Project: WNUC00129  
Sample ID: 377742004 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.12	+/-3.95	7.43	pCi/L
Radium-228	U	-0.173	+/-15.6	25.9	pCi/L
Ruthenium-106	U	-2.03	+/-35.0	54.2	pCi/L
Silver-110m	U	-0.334	+/-3.90	6.00	pCi/L
Sodium-22	U	-1.35	+/-3.87	6.32	pCi/L
Thallium-208	U	1.48	+/-4.04	6.69	pCi/L
Thorium-230	U	-439	+/-904	1390	pCi/L
Thorium-234	UI	0.00	+/-199	151	pCi/L
Tin-113	U	-2.12	+/-4.10	7.20	pCi/L
Uranium-235	U	-19.1	+/-25.4	36.6	pCi/L
Uranium-238	UI	0.00	+/-199	151	pCi/L
Yttrium-88	U	-1.34	+/-3.24	6.03	pCi/L
Zinc-65	U	-9.6	+/-8.50	13.9	pCi/L
Zirconium-95	U	3.95	+/-6.31	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.85	+/-2.49	3.85	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta		70.8	+/-5.03	3.74	5.00	pCi/L					
Alpha		7.68	+/-4.31	4.99	5.00	pCi/L	KXB2	08/17/15	1502	1497329	3
Beta		230	+/-9.60	3.00	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	172	+/-136	225	300	pCi/L	MYM1	08/11/15	2116	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 10  
Sample ID: 377742004

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377742005  
Matrix: Ground Water  
Collect Date: 13-JUL-15 11:05  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-13.7	+/-19.6	26.4		pCi/L		MJH1	08/04/15	1139	1495870	1
Americium-241	U	1.49	+/-10.9	17.2		pCi/L						
Antimony-124	U	11.1	+/-8.47	15.8		pCi/L						
Antimony-125	U	6.77	+/-8.88	16.3		pCi/L						
Barium-133	U	2.13	+/-6.81	8.11		pCi/L						
Barium-140	U	-19.9	+/-33.7	59.0		pCi/L						
Beryllium-7	U	-22.4	+/-37.9	53.3		pCi/L						
Bismuth-212	U	38.4	+/-48.4	92.5		pCi/L						
Bismuth-214	U	0.655	+/-8.59	14.1		pCi/L						
Cerium-139	U	0.0229	+/-2.71	4.90		pCi/L						
Cerium-141	U	-1.15	+/-7.21	12.0		pCi/L						
Cerium-144	U	-14.3	+/-20.0	32.5		pCi/L						
Cesium-134	U	-1.84	+/-3.88	6.65		pCi/L						
Cesium-136	U	-8.65	+/-12.0	20.8		pCi/L						
Cesium-137	U	-3.03	+/-3.76	5.51	10.0	pCi/L						
Chromium-51	U	16.9	+/-42.3	76.2		pCi/L						
Cobalt-56	U	0.844	+/-3.94	7.19		pCi/L						
Cobalt-57	U	2.45	+/-2.34	4.21		pCi/L						
Cobalt-58	U	1.53	+/-3.50	6.62		pCi/L						
Cobalt-60	U	1.10	+/-3.34	6.48		pCi/L						
Europium-152	U	-1.0	+/-9.49	16.5		pCi/L						
Europium-154	U	-3.99	+/-9.52	16.9		pCi/L						
Europium-155	U	-2.49	+/-10.3	15.9		pCi/L						
Iridium-192	U	-2.07	+/-3.69	6.27		pCi/L						
Iron-59	U	1.29	+/-8.70	16.4		pCi/L						
Lead-210	U	32.4	+/-306	306		pCi/L						
Lead-212	U	6.66	+/-11.1	11.0		pCi/L						
Lead-214	U	-0.984	+/-9.50	13.9		pCi/L						
Manganese-54	U	-1.29	+/-3.46	5.97		pCi/L						
Mercury-203	U	0.460	+/-3.99	7.10		pCi/L						
Neodymium-147	U	41.6	+/-73.7	141		pCi/L						
Neptunium-239	U	4.45	+/-24.3	41.8		pCi/L						
Niobium-94	U	-0.176	+/-2.85	5.13		pCi/L						
Niobium-95	U	0.517	+/-4.49	7.09		pCi/L						
Potassium-40	U	-21.6	+/-52.0	88.0		pCi/L						
Promethium-144	U	2.68	+/-3.36	6.40		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377742005

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.39	+/-4.69	7.33	pCi/L
Radium-228	U	-13.7	+/-19.6	26.4	pCi/L
Ruthenium-106	U	-7.03	+/-29.0	51.7	pCi/L
Silver-110m	U	0.722	+/-3.01	5.59	pCi/L
Sodium-22	U	-1.46	+/-3.37	5.95	pCi/L
Thallium-208	U	-0.781	+/-4.04	6.86	pCi/L
Thorium-230	U	-97.7	+/-874	1350	pCi/L
Thorium-234	U	86.9	+/-167	156	pCi/L
Tin-113	U	2.88	+/-4.46	8.14	pCi/L
Uranium-235	U	3.52	+/-24.7	34.4	pCi/L
Uranium-238	U	86.9	+/-167	156	pCi/L
Yttrium-88	U	0.651	+/-4.07	8.04	pCi/L
Zinc-65	U	-8.01	+/-7.14	11.7	pCi/L
Zirconium-95	U	-1.91	+/-6.74	11.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.10	+/-1.74	3.06	5.00	pCi/L	KXB2	08/14/15	1308	1497329	2
Beta		63.9	+/-4.71	3.58	5.00	pCi/L					
Alpha	U	1.74	+/-2.70	4.73	5.00	pCi/L	KXB2	08/17/15	1444	1497329	3
Beta		11.5	+/-3.26	3.82	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	72.1	+/-131	224	300	pCi/L	MYM1	08/11/15	2133	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.9	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377742005

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	377742006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:22		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.94	+/-20.5	32.0		pCi/L		MJH1	08/05/15	0652 1495870	1
Americium-241	U	-3.84	+/-11.2	19.3		pCi/L					
Antimony-124	U	-0.816	+/-11.3	21.4		pCi/L					
Antimony-125	U	-2.55	+/-9.55	17.1		pCi/L					
Barium-133	U	-3.89	+/-5.58	8.24		pCi/L					
Barium-140	U	-27.7	+/-47.3	81.3		pCi/L					
Beryllium-7	U	18.4	+/-46.1	75.6		pCi/L					
Bismuth-212	U	34.0	+/-51.1	97.4		pCi/L					
Bismuth-214	U	8.05	+/-15.0	18.2		pCi/L					
Cerium-139	U	2.81	+/-3.56	5.93		pCi/L					
Cerium-141	U	3.91	+/-10.1	14.8		pCi/L					
Cerium-144	U	12.7	+/-22.1	38.5		pCi/L					
Cesium-134	U	-1.08	+/-4.58	7.74		pCi/L					
Cesium-136	U	-4.51	+/-17.2	30.9		pCi/L					
Cesium-137	U	-1.09	+/-4.59	7.37	10.0	pCi/L					
Chromium-51	U	-3.51	+/-54.5	94.3		pCi/L					
Cobalt-56	U	0.390	+/-3.91	7.41		pCi/L					
Cobalt-57	U	-0.471	+/-2.91	4.87		pCi/L					
Cobalt-58	U	-3.43	+/-4.83	8.34		pCi/L					
Cobalt-60	U	2.51	+/-4.63	9.18		pCi/L					
Europium-152	U	1.92	+/-10.8	18.9		pCi/L					
Europium-154	U	-9.3	+/-12.7	21.8		pCi/L					
Europium-155	U	4.46	+/-10.7	18.7		pCi/L					
Iridium-192	U	-0.297	+/-4.42	7.65		pCi/L					
Iron-59	U	-0.388	+/-10.2	18.6		pCi/L					
Lead-210	U	-84.6	+/-248	406		pCi/L					
Lead-212	U	9.91	+/-12.8	13.6		pCi/L					
Lead-214	U	-2.77	+/-10.2	15.9		pCi/L					
Manganese-54	U	-2.27	+/-3.50	6.08		pCi/L					
Mercury-203	U	2.24	+/-4.68	8.45		pCi/L					
Neodymium-147	U	20.1	+/-111	204		pCi/L					
Neptunium-239	U	5.61	+/-28.6	49.0		pCi/L					
Niobium-94	U	2.40	+/-4.14	7.06		pCi/L					
Niobium-95	U	3.58	+/-2.85	7.70		pCi/L					
Potassium-40	U	30.1	+/-52.7	69.7		pCi/L					
Promethium-144	U	2.58	+/-4.23	6.70		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	377742006	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.32	+/-4.68	8.77	pCi/L
Radium-228	U	-4.94	+/-20.5	32.0	pCi/L
Ruthenium-106	U	17.3	+/-36.4	67.5	pCi/L
Silver-110m	U	3.40	+/-3.90	7.49	pCi/L
Sodium-22	U	-3.24	+/-4.50	7.77	pCi/L
Thallium-208	U	3.85	+/-7.66	6.68	pCi/L
Thorium-230	U	-1120	+/-1070	1450	pCi/L
Thorium-234	U	-123	+/-123	199	pCi/L
Tin-113	U	-0.333	+/-4.55	8.31	pCi/L
Uranium-235	U	8.25	+/-27.7	39.1	pCi/L
Uranium-238	U	-123	+/-123	199	pCi/L
Yttrium-88	U	-3.43	+/-4.93	8.59	pCi/L
Zinc-65	U	3.08	+/-9.02	17.0	pCi/L
Zirconium-95	U	6.27	+/-7.93	15.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.66	+/-1.61	2.17	5.00	pCi/L	KXB2	08/14/15	1310	1497329	2
Beta	14.5	+/-2.06	2.60	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	40.0	+/-132	228	300	pCi/L	MYM1	08/11/15	2150	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377742007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 12:12		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-29.5	+/-22.9	33.5		pCi/L		MJH1	08/05/15	0705 1495870	1
Americium-241	U	32.5	+/-33.4	46.2		pCi/L					
Antimony-124	U	-9.38	+/-15.1	21.2		pCi/L					
Antimony-125	U	8.23	+/-11.5	21.4		pCi/L					
Barium-133	U	5.05	+/-7.06	8.88		pCi/L					
Barium-140	U	-43.4	+/-50.7	87.3		pCi/L					
Beryllium-7	U	21.1	+/-45.6	83.4		pCi/L					
Bismuth-212	U	27.4	+/-57.1	111		pCi/L					
Bismuth-214	U	6.75	+/-13.5	14.2		pCi/L					
Cerium-139	U	0.413	+/-4.00	7.18		pCi/L					
Cerium-141	U	-1.91	+/-9.14	16.3		pCi/L					
Cerium-144	U	-27	+/-25.2	42.9		pCi/L					
Cesium-134	U	3.49	+/-4.07	7.58		pCi/L					
Cesium-136	U	36.5	+/-21.6	41.0		pCi/L					
Cesium-137	U	-3.07	+/-4.39	7.06	10.0	pCi/L					
Chromium-51	U	-54.6	+/-63.4	97.7		pCi/L					
Cobalt-56	U	-1.04	+/-5.13	9.25		pCi/L					
Cobalt-57	U	0.0326	+/-3.23	5.83		pCi/L					
Cobalt-58	U	-2.06	+/-4.62	8.15		pCi/L					
Cobalt-60	U	1.92	+/-4.13	8.58		pCi/L					
Europium-152	U	-7.17	+/-11.3	19.1		pCi/L					
Europium-154	U	-6.92	+/-12.8	22.9		pCi/L					
Europium-155	U	9.45	+/-14.0	24.5		pCi/L					
Iridium-192	U	1.98	+/-4.54	8.30		pCi/L					
Iron-59	U	-12.8	+/-10.6	15.2		pCi/L					
Lead-210	U	617	+/-967	1740		pCi/L					
Lead-212	UI	0.00	+/-13.5	11.5		pCi/L					
Lead-214	U	4.84	+/-12.1	19.2		pCi/L					
Manganese-54	U	-1.97	+/-3.99	6.98		pCi/L					
Mercury-203	U	2.51	+/-5.29	9.67		pCi/L					
Neodymium-147	U	-30.2	+/-122	223		pCi/L					
Neptunium-239	U	8.53	+/-33.7	61.6		pCi/L					
Niobium-94	U	-1.46	+/-3.84	6.83		pCi/L					
Niobium-95	U	-2.03	+/-4.73	8.38		pCi/L					
Potassium-40	U	-10.8	+/-64.6	117		pCi/L					
Promethium-144	U	2.39	+/-4.04	7.84		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377742007	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.08	+/-5.18	8.30	pCi/L
Radium-228	U	-29.5	+/-22.9	33.5	pCi/L
Ruthenium-106	U	3.18	+/-37.0	69.1	pCi/L
Silver-110m	U	2.28	+/-3.84	7.54	pCi/L
Sodium-22	U	-3.17	+/-4.61	8.09	pCi/L
Thallium-208	U	3.69	+/-5.66	6.98	pCi/L
Thorium-230	U	474	+/-1760	2740	pCi/L
Thorium-234	U	173	+/-266	346	pCi/L
Tin-113	U	5.88	+/-8.59	9.63	pCi/L
Uranium-235	U	-21.1	+/-28.9	43.7	pCi/L
Uranium-238	U	173	+/-266	346	pCi/L
Yttrium-88	U	3.35	+/-5.46	11.7	pCi/L
Zinc-65	U	5.34	+/-10.7	18.6	pCi/L
Zirconium-95	U	2.30	+/-8.43	16.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	4.12	+/-3.43	4.87	5.00	pCi/L	KXB2	08/13/15	1515	1497329	2
Beta		209	+/-11.9	4.82	5.00	pCi/L					
Alpha	U	-1.17	+/-1.57	3.04	5.00	pCi/L	KXB2	08/14/15	1310	1497329	3
Beta		188	+/-5.30	3.03	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	182	+/-138	228	300	pCi/L	MYM1	08/13/15	0104	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377742007	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	377742008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:40		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	1.80	+/-20.6	24.7		pCi/L		MJH1	08/05/15	0706 1495870	1
Americium-241	U	8.61	+/-10.7	17.7		pCi/L					
Antimony-124	U	-5.44	+/-9.67	17.2		pCi/L					
Antimony-125	U	-2.9	+/-8.36	14.2		pCi/L					
Barium-133	U	-0.31	+/-5.34	8.37		pCi/L					
Barium-140	U	5.39	+/-66.0	72.5		pCi/L					
Beryllium-7	U	3.31	+/-35.7	62.4		pCi/L					
Bismuth-212	U	39.3	+/-65.3	91.9		pCi/L					
Bismuth-214	U	12.0	+/-11.2	12.5		pCi/L					
Cerium-139	U	-1.08	+/-2.87	5.08		pCi/L					
Cerium-141	U	5.05	+/-7.75	13.5		pCi/L					
Cerium-144	U	8.30	+/-19.3	33.4		pCi/L					
Cesium-134	U	2.18	+/-3.73	7.04		pCi/L					
Cesium-136	U	-8.84	+/-18.6	27.9		pCi/L					
Cesium-137	U	0.533	+/-4.15	6.79	10.0	pCi/L					
Chromium-51	U	-7.46	+/-47.7	82.9		pCi/L					
Cobalt-56	U	-3.49	+/-4.03	6.60		pCi/L					
Cobalt-57	U	0.319	+/-2.49	4.26		pCi/L					
Cobalt-58	U	-2.92	+/-4.04	6.76		pCi/L					
Cobalt-60	U	0.109	+/-3.53	6.58		pCi/L					
Europium-152	U	2.50	+/-9.34	15.6		pCi/L					
Europium-154	U	2.09	+/-8.76	17.0		pCi/L					
Europium-155	U	5.28	+/-10.6	17.1		pCi/L					
Iridium-192	U	-1.2	+/-3.77	6.51		pCi/L					
Iron-59	U	3.08	+/-7.95	15.3		pCi/L					
Lead-210	U	-71.6	+/-241	382		pCi/L					
Lead-212	U	0.844	+/-8.19	10.9		pCi/L					
Lead-214	U	-1.56	+/-9.47	13.8		pCi/L					
Manganese-54	U	-1.47	+/-3.37	5.79		pCi/L					
Mercury-203	U	-1.85	+/-4.14	7.13		pCi/L					
Neodymium-147	U	-45.4	+/-104	158		pCi/L					
Neptunium-239	U	-15.9	+/-25.4	41.8		pCi/L					
Niobium-94	U	3.48	+/-6.00	5.55		pCi/L					
Niobium-95	U	4.20	+/-4.10	8.01		pCi/L					
Potassium-40	U	-13.6	+/-48.5	83.3		pCi/L					
Promethium-144	U	1.28	+/-3.90	6.29		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 16  
Sample ID: 377742008

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.996	+/-3.84	6.56	pCi/L
Radium-228	U	1.80	+/-20.6	24.7	pCi/L
Ruthenium-106	U	-16.9	+/-28.6	49.4	pCi/L
Silver-110m	U	-0.593	+/-3.19	5.70	pCi/L
Sodium-22	U	0.789	+/-3.12	6.05	pCi/L
Thallium-208	U	1.55	+/-3.72	5.58	pCi/L
Thorium-230	U	375	+/-888	1420	pCi/L
Thorium-234	U	128	+/-166	162	pCi/L
Tin-113	U	-0.801	+/-4.58	7.90	pCi/L
Uranium-235	U	8.67	+/-24.2	34.2	pCi/L
Uranium-238	U	128	+/-166	162	pCi/L
Yttrium-88	U	1.06	+/-3.88	7.86	pCi/L
Zinc-65	U	5.48	+/-8.23	14.5	pCi/L
Zirconium-95	U	1.40	+/-7.95	12.8	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.59	+/-1.28	1.54	5.00	pCi/L	KXB2	08/14/15	1310	1497329	2
Beta	15.7	+/-2.12	2.72	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-45.4	+/-127	225	300	pCi/L	MYM1	08/11/15	2223	1497815	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009  
Matrix: Ground Water  
Collect Date: 15-JUL-15 09:35  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-6.36	+/-16.0	24.0		pCi/L		MJH1	08/05/15	0706 1495870	1
Americium-241	U	7.93	+/-17.6	31.9		pCi/L					
Antimony-124	U	0.536	+/-7.56	15.2		pCi/L					
Antimony-125	U	-0.402	+/-8.77	15.7		pCi/L					
Barium-133	U	-0.0681	+/-4.44	7.04		pCi/L					
Barium-140	U	29.1	+/-34.0	64.9		pCi/L					
Beryllium-7	U	19.0	+/-33.8	62.8		pCi/L					
Bismuth-212	U	31.6	+/-42.3	84.6		pCi/L					
Bismuth-214	U	8.57	+/-10.4	11.4		pCi/L					
Cerium-139	U	-1.49	+/-3.52	5.20		pCi/L					
Cerium-141	U	-0.0819	+/-7.23	12.4		pCi/L					
Cerium-144	U	13.8	+/-19.7	35.3		pCi/L					
Cesium-134	U	-0.207	+/-3.21	5.99		pCi/L					
Cesium-136	U	-4.61	+/-13.0	23.1		pCi/L					
Cesium-137	U	-2.3	+/-3.72	6.18	10.0	pCi/L					
Chromium-51	U	-17.6	+/-43.3	76.1		pCi/L					
Cobalt-56	U	0.843	+/-3.53	6.74		pCi/L					
Cobalt-57	U	2.09	+/-2.72	4.88		pCi/L					
Cobalt-58	U	1.47	+/-3.43	6.03		pCi/L					
Cobalt-60	U	-2.92	+/-3.82	5.85		pCi/L					
Europium-152	U	5.86	+/-8.95	16.8		pCi/L					
Europium-154	U	-0.745	+/-9.76	17.9		pCi/L					
Europium-155	U	-7.6	+/-10.6	17.8		pCi/L					
Iridium-192	U	0.550	+/-3.50	6.39		pCi/L					
Iron-59	U	-1.45	+/-8.11	14.7		pCi/L					
Lead-210	U	33.9	+/-713	706		pCi/L					
Lead-212	U	1.92	+/-9.74	11.3		pCi/L					
Lead-214	U	5.55	+/-11.6	14.9		pCi/L					
Manganese-54	U	-0.956	+/-4.79	6.87		pCi/L					
Mercury-203	U	0.577	+/-4.14	7.54		pCi/L					
Neodymium-147	U	-25.2	+/-72.4	126		pCi/L					
Neptunium-239	U	-20.5	+/-27.3	45.6		pCi/L					
Niobium-94	U	2.78	+/-3.32	6.25		pCi/L					
Niobium-95	U	1.00	+/-3.97	6.69		pCi/L					
Potassium-40	U	17.6	+/-61.8	65.9		pCi/L					
Promethium-144	U	-1.77	+/-3.47	5.81		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.0954	+/-4.08	7.29	pCi/L
Radium-228	U	-6.36	+/-16.0	24.0	pCi/L
Ruthenium-106	U	-7.57	+/-29.1	50.5	pCi/L
Silver-110m	U	0.493	+/-3.38	6.06	pCi/L
Sodium-22	U	-0.166	+/-3.47	6.38	pCi/L
Thallium-208	U	0.602	+/-4.40	7.28	pCi/L
Thorium-230	U	464	+/-1140	2050	pCi/L
Thorium-234	U	-144	+/-196	295	pCi/L
Tin-113	U	1.30	+/-4.40	8.06	pCi/L
Uranium-235	U	-7.81	+/-24.6	36.4	pCi/L
Uranium-238	U	-144	+/-196	295	pCi/L
Yttrium-88	U	-2.8	+/-3.35	5.58	pCi/L
Zinc-65	U	0.0229	+/-6.47	10.6	pCi/L
Zirconium-95	U	-5.86	+/-6.74	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.23	+/-2.53	4.72	5.00	pCi/L	KXB2	08/13/15	1513	1497329	2
Beta		498	+/-18.1	4.97	5.00	pCi/L					
Alpha	U	1.52	+/-1.53	2.51	5.00	pCi/L	KXB2	08/14/15	1311	1497329	3
Beta		455	+/-7.95	2.55	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	663	+/-155	225	300	pCi/L	MYM1	08/11/15	2240	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 17  
Sample ID: 377742009

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	377742010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.1	+/-24.8	32.0		pCi/L		MJH1	08/05/15	0715 1495870	1
Americium-241	U	-12.6	+/-16.6	25.1		pCi/L					
Antimony-124	U	1.51	+/-10.9	21.0		pCi/L					
Antimony-125	U	-3.58	+/-9.52	16.3		pCi/L					
Barium-133	U	3.63	+/-4.50	7.63		pCi/L					
Barium-140	U	32.4	+/-40.4	76.4		pCi/L					
Beryllium-7	U	-13.2	+/-46.1	68.2		pCi/L					
Bismuth-212	UI	0.00	+/-83.6	94.5		pCi/L					
Bismuth-214	U	-0.83	+/-9.14	15.6		pCi/L					
Cerium-139	U	-1.95	+/-3.23	5.29		pCi/L					
Cerium-141	U	5.12	+/-8.10	12.9		pCi/L					
Cerium-144	U	4.15	+/-21.1	36.6		pCi/L					
Cesium-134	U	2.21	+/-4.27	7.10		pCi/L					
Cesium-136	U	-3.93	+/-16.8	25.3		pCi/L					
Cesium-137	U	2.80	+/-6.46	6.12	10.0	pCi/L					
Chromium-51	U	12.1	+/-46.5	84.3		pCi/L					
Cobalt-56	U	-2.65	+/-4.02	6.82		pCi/L					
Cobalt-57	U	0.726	+/-2.70	4.73		pCi/L					
Cobalt-58	U	4.87	+/-5.36	6.33		pCi/L					
Cobalt-60	U	1.70	+/-3.77	7.53		pCi/L					
Europium-152	U	-2.59	+/-9.61	16.8		pCi/L					
Europium-154	U	1.78	+/-10.0	19.5		pCi/L					
Europium-155	U	10.9	+/-10.1	18.7		pCi/L					
Iridium-192	U	-0.921	+/-3.72	6.53		pCi/L					
Iron-59	U	3.38	+/-7.51	15.3		pCi/L					
Lead-210	U	-237	+/-401	615		pCi/L					
Lead-212	U	3.77	+/-12.9	13.0		pCi/L					
Lead-214	U	12.2	+/-15.3	15.7		pCi/L					
Manganese-54	U	1.87	+/-3.43	6.63		pCi/L					
Mercury-203	U	2.55	+/-4.22	7.85		pCi/L					
Neodymium-147	U	-97.6	+/-93.6	148		pCi/L					
Neptunium-239	U	8.86	+/-26.6	46.9		pCi/L					
Niobium-94	U	-4.66	+/-3.97	5.89		pCi/L					
Niobium-95	U	1.34	+/-3.91	7.44		pCi/L					
Potassium-40	U	20.3	+/-46.3	58.4		pCi/L					
Promethium-144	U	1.45	+/-3.50	5.94		pCi/L					



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 18 Project: WNUC00129  
Sample ID: 377742010 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.384	+/-4.45	7.78	pCi/L
Radium-228	U	13.1	+/-24.8	32.0	pCi/L
Ruthenium-106	U	9.07	+/-31.3	59.2	pCi/L
Silver-110m	U	-0.387	+/-4.12	6.49	pCi/L
Sodium-22	U	1.27	+/-3.49	6.97	pCi/L
Thallium-208	U	-0.751	+/-4.56	7.41	pCi/L
Thorium-230	U	103	+/-1190	1890	pCi/L
Thorium-234	U	142	+/-187	216	pCi/L
Tin-113	U	0.0652	+/-4.82	8.56	pCi/L
Uranium-235	U	5.31	+/-23.6	35.6	pCi/L
Uranium-238	U	142	+/-187	216	pCi/L
Yttrium-88	U	-1.73	+/-4.06	7.50	pCi/L
Zinc-65	U	-4.49	+/-8.43	12.5	pCi/L
Zirconium-95	U	-0.452	+/-6.65	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	16.6	+/-7.28	10.3	5.00	pCi/L	KXB2	08/14/15	1926	1497329	2
Beta	171	+/-8.69	6.93	5.00	pCi/L					
Alpha	U 10.7	+/-8.50	13.7	5.00	pCi/L	KXB2	08/17/15	1943	1497329	3
Beta	188	+/-10.9	12.4	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	267	+/-138	221	300	pCi/L	MYM1	08/11/15	2257	1497815	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 18  
Sample ID: 377742010

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	377742011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:34		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	12.4	+/-12.9	26.9		pCi/L		MJH1	08/05/15	0716 1495870	1
Americium-241	U	42.9	+/-29.1	51.9		pCi/L					
Antimony-124	U	-4.63	+/-11.9	21.4		pCi/L					
Antimony-125	U	-0.584	+/-10.2	18.0		pCi/L					
Barium-133	U	-1.17	+/-5.26	8.06		pCi/L					
Barium-140	U	9.44	+/-34.5	63.6		pCi/L					
Beryllium-7	U	-1.93	+/-53.1	59.2		pCi/L					
Bismuth-212	U	53.1	+/-44.5	94.5		pCi/L					
Bismuth-214		15.9	+/-13.7	12.5		pCi/L					
Cerium-139	U	1.19	+/-3.29	5.73		pCi/L					
Cerium-141	U	6.80	+/-7.62	13.7		pCi/L					
Cerium-144	U	-12.3	+/-22.6	37.5		pCi/L					
Cesium-134	U	-1.05	+/-4.01	6.57		pCi/L					
Cesium-136	U	-1.2	+/-13.8	25.3		pCi/L					
Cesium-137	U	0.996	+/-3.43	6.64	10.0	pCi/L					
Chromium-51	U	29.9	+/-45.4	85.2		pCi/L					
Cobalt-56	U	6.54	+/-4.40	8.37		pCi/L					
Cobalt-57	U	-0.904	+/-3.40	5.10		pCi/L					
Cobalt-58	U	-1.03	+/-4.66	7.27		pCi/L					
Cobalt-60	U	0.122	+/-3.91	7.62		pCi/L					
Europium-152	U	-2.09	+/-10.6	18.6		pCi/L					
Europium-154	U	-4.37	+/-11.5	21.1		pCi/L					
Europium-155	U	-1.33	+/-12.0	18.5		pCi/L					
Iridium-192	U	2.08	+/-4.53	7.47		pCi/L					
Iron-59	U	-1.1	+/-8.69	15.9		pCi/L					
Lead-210	U	1580	+/-1790	1760		pCi/L					
Lead-212	U	-0.383	+/-8.65	12.3		pCi/L					
Lead-214		16.9	+/-13.5	16.6		pCi/L					
Manganese-54	U	-0.999	+/-3.36	6.07		pCi/L					
Mercury-203	U	-0.653	+/-4.39	7.83		pCi/L					
Neodymium-147	U	112	+/-79.2	160		pCi/L					
Neptunium-239	U	-0.436	+/-33.4	51.4		pCi/L					
Niobium-94	U	2.95	+/-3.26	6.60		pCi/L					
Niobium-95	U	0.445	+/-3.85	7.33		pCi/L					
Potassium-40	U	35.9	+/-54.9	64.6		pCi/L					
Promethium-144	U	-1.91	+/-3.60	6.33		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 20 Project: WNUC00129  
Sample ID: 377742011 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-5.93	+/-4.63	7.25	pCi/L
Radium-228	U	12.4	+/-12.9	26.9	pCi/L
Ruthenium-106	U	-1.65	+/-31.7	59.1	pCi/L
Silver-110m	U	0.589	+/-3.34	6.38	pCi/L
Sodium-22	U	-1.68	+/-4.05	7.38	pCi/L
Thallium-208	U	2.88	+/-4.76	6.28	pCi/L
Thorium-230	U	283	+/-2570	2520	pCi/L
Thorium-234	U	45.2	+/-310	435	pCi/L
Tin-113	U	1.96	+/-4.75	8.81	pCi/L
Uranium-235	U	-8.54	+/-25.5	38.3	pCi/L
Uranium-238	U	45.2	+/-310	435	pCi/L
Yttrium-88	U	1.78	+/-4.45	9.39	pCi/L
Zinc-65	U	-3.84	+/-8.97	15.5	pCi/L
Zirconium-95	U	2.64	+/-6.51	12.9	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.255	+/-1.38	2.53	5.00	pCi/L	KXB2	08/14/15	1311	1497329	2
Beta	U	1.72	+/-1.53	2.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	32.4	+/-130	225	300	pCi/L	MYM1	08/16/15	0933	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	377742012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:51		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.99	+/-20.1	32.8		pCi/L		MJH1	08/05/15	0723 1495870	1
Americium-241	U	7.59	+/-6.23	10.5		pCi/L					
Antimony-124	U	1.37	+/-11.3	22.7		pCi/L					
Antimony-125	U	8.59	+/-9.57	18.6		pCi/L					
Barium-133	U	0.852	+/-5.18	8.35		pCi/L					
Barium-140	U	-10.6	+/-50.8	89.0		pCi/L					
Beryllium-7	U	-17	+/-48.1	72.0		pCi/L					
Bismuth-212	U	18.7	+/-59.3	112		pCi/L					
Bismuth-214		18.1	+/-13.2	14.0		pCi/L					
Cerium-139	U	-0.354	+/-3.49	5.44		pCi/L					
Cerium-141	U	8.15	+/-8.29	13.9		pCi/L					
Cerium-144	U	11.5	+/-20.8	35.9		pCi/L					
Cesium-134	U	-0.252	+/-5.30	8.34		pCi/L					
Cesium-136	U	-8.1	+/-15.9	27.3		pCi/L					
Cesium-137	U	4.31	+/-6.16	5.76	10.0	pCi/L					
Chromium-51	U	-18	+/-54.5	91.9		pCi/L					
Cobalt-56	U	0.680	+/-5.63	9.37		pCi/L					
Cobalt-57	U	0.769	+/-2.58	4.42		pCi/L					
Cobalt-58	U	-4.25	+/-5.20	7.60		pCi/L					
Cobalt-60	U	0.448	+/-4.36	8.35		pCi/L					
Europium-152	U	2.88	+/-11.3	19.8		pCi/L					
Europium-154	U	-7.02	+/-11.4	19.8		pCi/L					
Europium-155	U	-0.659	+/-10.7	16.1		pCi/L					
Iridium-192	U	4.49	+/-4.54	8.32		pCi/L					
Iron-59	U	-1.1	+/-10.9	19.6		pCi/L					
Lead-210	U	12.1	+/-91.5	93.6		pCi/L					
Lead-212	U	2.52	+/-9.56	10.4		pCi/L					
Lead-214	U	8.47	+/-12.9	16.3		pCi/L					
Manganese-54	U	0.197	+/-4.05	7.49		pCi/L					
Mercury-203	U	1.29	+/-4.93	8.70		pCi/L					
Neodymium-147	U	-10.3	+/-111	197		pCi/L					
Neptunium-239	U	24.3	+/-29.9	46.6		pCi/L					
Niobium-94	U	0.248	+/-3.78	7.01		pCi/L					
Niobium-95	U	-1.41	+/-5.43	9.00		pCi/L					
Potassium-40	U	11.5	+/-63.2	112		pCi/L					
Promethium-144	U	3.12	+/-4.12	8.04		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 22 Project: WNUC00129  
Sample ID: 377742012 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.103	+/-4.94	8.91	pCi/L
Radium-228	U	4.99	+/-20.1	32.8	pCi/L
Ruthenium-106	U	0.849	+/-38.5	68.5	pCi/L
Silver-110m	U	2.96	+/-4.43	7.25	pCi/L
Sodium-22	U	-3.8	+/-4.20	6.99	pCi/L
Thallium-208	U	2.26	+/-4.83	8.29	pCi/L
Thorium-230	U	-123	+/-666	960	pCi/L
Thorium-234	U	82.4	+/-101	102	pCi/L
Tin-113	U	0.693	+/-5.31	9.70	pCi/L
Uranium-235	U	4.73	+/-30.1	33.3	pCi/L
Uranium-238	U	82.4	+/-101	102	pCi/L
Yttrium-88	U	-1.78	+/-5.04	9.32	pCi/L
Zinc-65	U	-2.9	+/-10.7	18.6	pCi/L
Zirconium-95	U	-7.92	+/-9.15	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	5.75	+/-3.34	4.96	5.00	pCi/L	KXB2	08/14/15	1316	1497329	2
Beta	42.5	+/-3.25	3.07	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	4.39	+/-128	222	300	pCi/L	MYM1	08/16/15	0950	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377742013  
Matrix: Ground Water  
Collect Date: 10-JUL-15 13:51  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.21	+/-25.6	38.2		pCi/L		MJH1	08/05/15	0731 1495870	1
Americium-241	U	2.45	+/-6.94	11.4		pCi/L					
Antimony-124	U	-21.6	+/-18.9	23.9		pCi/L					
Antimony-125	U	-0.321	+/-11.9	21.0		pCi/L					
Barium-133	U	1.49	+/-5.52	8.87		pCi/L					
Barium-140	U	-41.5	+/-69.5	110		pCi/L					
Beryllium-7	U	36.7	+/-48.3	90.8		pCi/L					
Bismuth-212	U	11.1	+/-76.6	125		pCi/L					
Bismuth-214	UI	0.00	+/-16.9	15.7		pCi/L					
Cerium-139	U	-2.89	+/-3.18	5.51		pCi/L					
Cerium-141	UI	0.00	+/-14.1	13.3		pCi/L					
Cerium-144	U	17.2	+/-21.8	37.4		pCi/L					
Cesium-134	U	2.19	+/-5.31	10.2		pCi/L					
Cesium-136	U	3.65	+/-19.1	36.9		pCi/L					
Cesium-137	U	0.864	+/-5.57	8.89	10.0	pCi/L					
Chromium-51	U	38.8	+/-57.4	107		pCi/L					
Cobalt-56	U	5.38	+/-6.89	10.1		pCi/L					
Cobalt-57	U	1.86	+/-2.68	4.79		pCi/L					
Cobalt-58	U	2.41	+/-5.51	10.6		pCi/L					
Cobalt-60	U	1.15	+/-3.76	7.89		pCi/L					
Europium-152	U	-0.564	+/-11.7	20.8		pCi/L					
Europium-154	U	-1.92	+/-14.6	27.3		pCi/L					
Europium-155	U	-1.02	+/-10.6	18.2		pCi/L					
Iridium-192	U	1.63	+/-4.54	8.31		pCi/L					
Iron-59	U	-7.97	+/-12.7	22.3		pCi/L					
Lead-210	U	12.8	+/-102	98.4		pCi/L					
Lead-212	U	10.4	+/-12.8	11.8		pCi/L					
Lead-214	U	14.1	+/-16.0	20.0		pCi/L					
Manganese-54	U	-4.24	+/-4.72	7.73		pCi/L					
Mercury-203	U	4.72	+/-7.62	8.51		pCi/L					
Neodymium-147	U	108	+/-110	259		pCi/L					
Neptunium-239	U	14.9	+/-26.6	47.3		pCi/L					
Niobium-94	U	0.224	+/-4.33	7.98		pCi/L					
Niobium-95	U	-0.283	+/-5.56	10.2		pCi/L					
Potassium-40	U	4.04	+/-59.4	81.3		pCi/L					
Promethium-144	U	-2.23	+/-4.66	8.15		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377742013

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.604	+/-5.14	9.21	pCi/L
Radium-228	U	-4.21	+/-25.6	38.2	pCi/L
Ruthenium-106	U	16.1	+/-41.8	79.7	pCi/L
Silver-110m	U	-1.87	+/-4.23	7.50	pCi/L
Sodium-22	U	-0.598	+/-5.18	9.72	pCi/L
Thallium-208	U	-0.157	+/-5.94	10.7	pCi/L
Thorium-230	U	314	+/-669	1020	pCi/L
Thorium-234	U	-24.7	+/-90.7	138	pCi/L
Tin-113	U	3.82	+/-5.53	10.4	pCi/L
Uranium-235	U	21.9	+/-29.8	37.9	pCi/L
Uranium-238	U	-24.7	+/-90.7	138	pCi/L
Yttrium-88	U	1.73	+/-6.42	13.3	pCi/L
Zinc-65	U	1.49	+/-10.8	18.5	pCi/L
Zirconium-95	U	-0.0979	+/-9.36	17.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.134	+/-1.94	4.31	5.00	pCi/L	KXB2	08/13/15	1643	1497329	2
Beta	U	3.59	+/-2.95	4.74	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	113	+/-134	225	300	pCi/L	MYM1	08/16/15	1007	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	377742014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:18		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.39	+/-18.5	22.7		pCi/L		MJH1	08/05/15	0732 1495870	1
Americium-241	U	1.98	+/-13.7	22.1		pCi/L					
Antimony-124	U	6.18	+/-9.81	20.7		pCi/L					
Antimony-125	U	-3.52	+/-8.19	14.2		pCi/L					
Barium-133	U	-4.73	+/-5.44	6.59		pCi/L					
Barium-140	U	0.848	+/-40.7	73.0		pCi/L					
Beryllium-7	U	30.9	+/-37.1	63.9		pCi/L					
Bismuth-212	U	-0.293	+/-58.8	91.1		pCi/L					
Bismuth-214	UI	0.00	+/-13.2	16.6		pCi/L					
Cerium-139	U	-2.39	+/-3.00	4.87		pCi/L					
Cerium-141	U	0.659	+/-7.47	12.8		pCi/L					
Cerium-144	U	3.08	+/-19.0	33.0		pCi/L					
Cesium-134	U	-0.944	+/-3.75	6.78		pCi/L					
Cesium-136	U	4.10	+/-17.6	33.0		pCi/L					
Cesium-137	U	-2.77	+/-4.07	6.03	10.0	pCi/L					
Chromium-51	U	16.8	+/-44.7	82.4		pCi/L					
Cobalt-56	U	4.26	+/-4.72	6.65		pCi/L					
Cobalt-57	U	1.08	+/-2.38	4.22		pCi/L					
Cobalt-58	U	3.06	+/-3.60	7.30		pCi/L					
Cobalt-60	U	1.99	+/-3.19	6.50		pCi/L					
Europium-152	U	6.26	+/-9.35	17.5		pCi/L					
Europium-154	U	4.14	+/-9.97	19.4		pCi/L					
Europium-155	U	5.71	+/-12.4	17.1		pCi/L					
Iridium-192	U	-3.1	+/-3.74	6.35		pCi/L					
Iron-59	U	-1.49	+/-8.60	15.6		pCi/L					
Lead-210	U	48.4	+/-404	464		pCi/L					
Lead-212	U	4.89	+/-8.95	11.6		pCi/L					
Lead-214	U	10.9	+/-10.7	14.7		pCi/L					
Manganese-54	U	-0.901	+/-2.91	5.26		pCi/L					
Mercury-203	U	-0.531	+/-4.09	7.31		pCi/L					
Neodymium-147	U	-7.02	+/-89.7	160		pCi/L					
Neptunium-239	U	5.35	+/-24.9	43.6		pCi/L					
Niobium-94	U	0.533	+/-3.52	5.77		pCi/L					
Niobium-95	U	-0.0138	+/-3.89	7.23		pCi/L					
Potassium-40	U	-30.9	+/-50.6	80.3		pCi/L					
Promethium-144	U	-0.539	+/-3.58	5.68		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 24 Project: WNUC00129  
Sample ID: 377742014 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.36	+/-3.93	7.35	pCi/L
Radium-228	U	7.39	+/-18.5	22.7	pCi/L
Ruthenium-106	U	33.3	+/-32.6	47.9	pCi/L
Silver-110m	U	-1.44	+/-2.89	5.17	pCi/L
Sodium-22	U	1.62	+/-3.56	6.95	pCi/L
Thallium-208	U	0.618	+/-4.40	7.29	pCi/L
Thorium-230	U	-99.3	+/-924	1620	pCi/L
Thorium-234	U	39.0	+/-186	201	pCi/L
Tin-113	U	-2.48	+/-4.26	7.30	pCi/L
Uranium-235	U	-7.16	+/-22.9	32.9	pCi/L
Uranium-238	U	39.0	+/-186	201	pCi/L
Yttrium-88	U	0.328	+/-4.18	8.21	pCi/L
Zinc-65	U	-8.34	+/-7.54	11.9	pCi/L
Zirconium-95	U	1.81	+/-7.02	13.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.712	+/-1.08	1.89	5.00	pCi/L	KXB2	08/14/15	1316	1497329	2
Beta	U	1.97	+/-1.56	2.56	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-30.6	+/-125	220	300	pCi/L	MYM1	08/16/15	1023	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377742015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.697	+/-15.8	25.3		pCi/L		MJH1	08/05/15	1142 1495870	1
Americium-241	U	31.0	+/-30.9	52.9		pCi/L					
Antimony-124	U	2.16	+/-10.4	21.3		pCi/L					
Antimony-125	U	12.1	+/-14.5	18.8		pCi/L					
Barium-133	U	0.760	+/-4.89	7.84		pCi/L					
Barium-140	U	-22.1	+/-49.2	83.4		pCi/L					
Beryllium-7	U	60.0	+/-42.3	83.9		pCi/L					
Bismuth-212	U	-6.53	+/-47.4	87.6		pCi/L					
Bismuth-214	U	3.81	+/-11.6	16.3		pCi/L					
Cerium-139	U	-1.42	+/-3.63	6.02		pCi/L					
Cerium-141	U	7.47	+/-9.80	15.8		pCi/L					
Cerium-144	U	16.4	+/-23.5	41.9		pCi/L					
Cesium-134	U	-1.11	+/-3.99	7.20		pCi/L					
Cesium-136	U	-5.48	+/-19.0	33.8		pCi/L					
Cesium-137	U	-1.31	+/-3.71	6.70	10.0	pCi/L					
Chromium-51	U	23.0	+/-51.1	94.9		pCi/L					
Cobalt-56	U	-0.155	+/-4.63	8.54		pCi/L					
Cobalt-57	U	0.263	+/-2.98	5.17		pCi/L					
Cobalt-58	U	0.00718	+/-4.56	8.46		pCi/L					
Cobalt-60	U	0.741	+/-3.56	6.48		pCi/L					
Europium-152	U	-0.565	+/-10.3	18.5		pCi/L					
Europium-154	U	1.51	+/-10.2	20.5		pCi/L					
Europium-155	U	-2.88	+/-12.2	20.9		pCi/L					
Iridium-192	U	-1.21	+/-4.04	7.12		pCi/L					
Iron-59	U	2.69	+/-9.64	18.7		pCi/L					
Lead-210	U	-703	+/-1360	2080		pCi/L					
Lead-212	U	6.84	+/-10.6	13.0		pCi/L					
Lead-214	U	8.61	+/-12.7	14.2		pCi/L					
Manganese-54	U	0.612	+/-3.24	6.25		pCi/L					
Mercury-203	U	-2.67	+/-4.47	7.73		pCi/L					
Neodymium-147	U	-162	+/-108	158		pCi/L					
Neptunium-239	U	-41.2	+/-31.4	49.8		pCi/L					
Niobium-94	U	-0.39	+/-3.37	6.19		pCi/L					
Niobium-95	U	1.47	+/-4.75	9.07		pCi/L					
Potassium-40	U	-46.8	+/-54.5	93.3		pCi/L					
Promethium-144	U	0.198	+/-3.37	6.34		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377742015	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.08	+/-4.06	7.11	pCi/L
Radium-228	U	-0.697	+/-15.8	25.3	pCi/L
Ruthenium-106	U	22.5	+/-34.0	67.0	pCi/L
Silver-110m	U	3.49	+/-3.68	7.45	pCi/L
Sodium-22	U	0.603	+/-3.64	7.30	pCi/L
Thallium-208	U	0.385	+/-4.87	7.74	pCi/L
Thorium-230	U	63.7	+/-1820	2870	pCi/L
Thorium-234	U	29.6	+/-339	456	pCi/L
Tin-113	U	5.88	+/-4.72	8.71	pCi/L
Uranium-235	U	11.7	+/-28.2	36.8	pCi/L
Uranium-238	U	29.6	+/-339	456	pCi/L
Yttrium-88	U	2.91	+/-4.11	9.38	pCi/L
Zinc-65	U	-9.39	+/-11.6	15.4	pCi/L
Zirconium-95	U	-0.0422	+/-8.19	15.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.12	+/-1.04	1.68	5.00	pCi/L	KXB2	08/14/15	1311	1497329	2
Beta		12.5	+/-2.09	2.87	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-14.9	+/-135	237	300	pCi/L	MYM1	08/16/15	1040	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	377742016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:55		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	10.7	+/-22.5	30.7		pCi/L		MJH1	08/05/15	1147 1495870	1
Americium-241	U	9.42	+/-15.2	25.4		pCi/L					
Antimony-124	U	-7.64	+/-11.4	19.0		pCi/L					
Antimony-125	U	2.50	+/-8.66	15.8		pCi/L					
Barium-133	U	0.517	+/-4.90	7.71		pCi/L					
Barium-140	U	-1.06	+/-36.1	63.1		pCi/L					
Beryllium-7	U	2.76	+/-33.8	60.2		pCi/L					
Bismuth-212	U	65.9	+/-47.5	98.2		pCi/L					
Bismuth-214		19.3	+/-12.4	10.6		pCi/L					
Cerium-139	U	-1.08	+/-3.31	5.50		pCi/L					
Cerium-141	U	1.25	+/-6.92	12.0		pCi/L					
Cerium-144	U	0.726	+/-19.8	34.1		pCi/L					
Cesium-134	U	-1.16	+/-4.29	6.58		pCi/L					
Cesium-136	U	0.0198	+/-13.8	25.0		pCi/L					
Cesium-137	U	0.329	+/-5.96	6.60	10.0	pCi/L					
Chromium-51	U	17.2	+/-42.5	77.8		pCi/L					
Cobalt-56	U	1.64	+/-4.27	8.05		pCi/L					
Cobalt-57	U	0.406	+/-2.60	4.53		pCi/L					
Cobalt-58	U	0.288	+/-4.41	7.08		pCi/L					
Cobalt-60	U	0.0146	+/-3.68	6.99		pCi/L					
Europium-152	U	1.63	+/-9.69	17.5		pCi/L					
Europium-154	U	6.06	+/-9.29	19.4		pCi/L					
Europium-155	U	-6.54	+/-11.0	18.4		pCi/L					
Iridium-192	U	0.588	+/-3.57	6.47		pCi/L					
Iron-59	U	7.88	+/-7.58	16.3		pCi/L					
Lead-210	U	-86.4	+/-416	657		pCi/L					
Lead-212	U	3.43	+/-10.1	10.4		pCi/L					
Lead-214	U	8.39	+/-12.9	16.3		pCi/L					
Manganese-54	U	-0.958	+/-3.37	5.98		pCi/L					
Mercury-203	U	0.892	+/-4.14	7.52		pCi/L					
Neodymium-147	U	8.39	+/-74.6	133		pCi/L					
Neptunium-239	U	-23.8	+/-26.2	43.0		pCi/L					
Niobium-94	U	-1.48	+/-3.79	6.22		pCi/L					
Niobium-95	UI	0.00	+/-4.34	7.01		pCi/L					
Potassium-40	U	-16.6	+/-45.4	77.6		pCi/L					
Promethium-144	U	-0.497	+/-3.26	5.91		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 27 Project: WNUC00129  
Sample ID: 377742016 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.697	+/-4.28	7.46	pCi/L
Radium-228	U	10.7	+/-22.5	30.7	pCi/L
Ruthenium-106	U	0.559	+/-34.7	56.0	pCi/L
Silver-110m	U	1.36	+/-3.66	6.18	pCi/L
Sodium-22	U	2.14	+/-3.29	6.86	pCi/L
Thallium-208	U	2.53	+/-4.54	7.79	pCi/L
Thorium-230	U	1030	+/-1180	1780	pCi/L
Thorium-234	U	14.0	+/-204	257	pCi/L
Tin-113	U	-2.94	+/-5.11	8.64	pCi/L
Uranium-235	U	-17.7	+/-22.9	33.3	pCi/L
Uranium-238	U	14.0	+/-204	257	pCi/L
Yttrium-88	U	-3.57	+/-3.92	6.52	pCi/L
Zinc-65	U	-5.24	+/-7.38	12.9	pCi/L
Zirconium-95	U	0.364	+/-6.64	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.43	+/-2.99	4.98	5.00	pCi/L	KXB2	08/13/15	1646	1497329	2
Beta		5.42	+/-3.19	4.83	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	26.1	+/-130	225	300	pCi/L	MYM1	08/16/15	1057	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	377742017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:38		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	UI	0.00	+/-16.1	20.6		pCi/L		MJH1	08/05/15	1148 1495870	1
Americium-241	U	-4.13	+/-14.5	22.6		pCi/L					
Antimony-124	U	-2.21	+/-9.26	17.3		pCi/L					
Antimony-125	U	3.70	+/-8.53	15.8		pCi/L					
Barium-133	U	-2.0	+/-5.58	7.28		pCi/L					
Barium-140	U	-17.4	+/-38.4	65.3		pCi/L					
Beryllium-7	U	-8.91	+/-41.5	62.8		pCi/L					
Bismuth-212	U	-14.6	+/-56.0	83.1		pCi/L					
Bismuth-214	U	11.3	+/-13.2	11.7		pCi/L					
Cerium-139	U	-1.06	+/-2.82	4.70		pCi/L					
Cerium-141	U	4.13	+/-13.3	11.9		pCi/L					
Cerium-144	U	-1.22	+/-18.4	31.6		pCi/L					
Cesium-134	U	1.44	+/-3.32	6.04		pCi/L					
Cesium-136	U	8.20	+/-11.6	23.8		pCi/L					
Cesium-137	U	-3.82	+/-4.03	5.90	10.0	pCi/L					
Chromium-51	U	-34.2	+/-38.8	65.6		pCi/L					
Cobalt-56	U	3.26	+/-3.67	7.00		pCi/L					
Cobalt-57	U	-0.573	+/-2.51	4.27		pCi/L					
Cobalt-58	U	-1.82	+/-4.29	6.50		pCi/L					
Cobalt-60	U	1.38	+/-3.14	5.69		pCi/L					
Europium-152	U	-4.55	+/-8.79	15.2		pCi/L					
Europium-154	U	1.91	+/-9.64	18.3		pCi/L					
Europium-155	U	6.79	+/-9.85	17.7		pCi/L					
Iridium-192	U	0.907	+/-3.23	5.95		pCi/L					
Iron-59	U	-6.64	+/-8.02	13.2		pCi/L					
Lead-210	U	48.8	+/-320	489		pCi/L					
Lead-212		9.19	+/-8.67	8.92		pCi/L					
Lead-214	U	1.60	+/-10.1	13.0		pCi/L					
Manganese-54	U	1.26	+/-2.98	5.80		pCi/L					
Mercury-203	U	3.02	+/-3.89	7.34		pCi/L					
Neodymium-147	U	-5.93	+/-82.7	147		pCi/L					
Neptunium-239	U	-7.16	+/-24.9	42.4		pCi/L					
Niobium-94	U	2.58	+/-2.77	5.60		pCi/L					
Niobium-95	U	-1.48	+/-3.56	6.37		pCi/L					
Potassium-40	U	37.4	+/-52.3	61.9		pCi/L					
Promethium-144	U	-1.79	+/-2.87	5.04		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 28 Project: WNUC00129  
Sample ID: 377742017 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-4.07	+/-3.97	6.46	pCi/L
Radium-228	UI	0.00	+/-16.1	20.6	pCi/L
Ruthenium-106	U	-23.8	+/-28.6	46.1	pCi/L
Silver-110m	U	-0.0758	+/-3.17	5.89	pCi/L
Sodium-22	U	0.625	+/-3.41	6.47	pCi/L
Thallium-208	U	0.848	+/-4.04	5.72	pCi/L
Thorium-230	U	421	+/-1030	1670	pCi/L
Thorium-234	U	31.4	+/-202	237	pCi/L
Tin-113	U	1.85	+/-4.39	8.10	pCi/L
Uranium-235	U	11.1	+/-35.7	31.9	pCi/L
Uranium-238	U	31.4	+/-202	237	pCi/L
Yttrium-88	U	2.05	+/-3.64	7.87	pCi/L
Zinc-65	U	4.77	+/-6.17	11.8	pCi/L
Zirconium-95	U	0.596	+/-6.99	13.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	3.93	+/-2.27	3.41	5.00	pCi/L	KXB2	08/14/15	1926	1497329	2
Beta	19.9	+/-2.52	3.40	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-123	+/-127	231	300	pCi/L	MYM1	08/16/15	1114	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			94.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377742018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-10.1	+/-15.7	20.7		pCi/L		MJH1	08/05/15	1151 1495870	1
Americium-241	U	0.191	+/-12.6	19.2		pCi/L					
Antimony-124	U	1.76	+/-9.51	18.8		pCi/L					
Antimony-125	U	-1.3	+/-8.84	15.2		pCi/L					
Barium-133	UI	0.00	+/-6.21	6.92		pCi/L					
Barium-140	U	46.9	+/-36.3	73.8		pCi/L					
Beryllium-7	U	3.82	+/-31.9	59.4		pCi/L					
Bismuth-212	U	27.4	+/-44.4	86.0		pCi/L					
Bismuth-214	U	8.93	+/-9.55	11.8		pCi/L					
Cerium-139	U	-0.529	+/-2.76	4.88		pCi/L					
Cerium-141	U	4.16	+/-8.57	11.0		pCi/L					
Cerium-144	U	-4.77	+/-18.8	33.3		pCi/L					
Cesium-134	U	2.30	+/-3.35	6.60		pCi/L					
Cesium-136	U	-11.1	+/-16.3	22.1		pCi/L					
Cesium-137	U	1.15	+/-3.10	5.91	10.0	pCi/L					
Chromium-51	U	-12.7	+/-42.0	72.3		pCi/L					
Cobalt-56	U	2.93	+/-3.72	7.36		pCi/L					
Cobalt-57	U	-1.3	+/-2.33	4.08		pCi/L					
Cobalt-58	U	-0.792	+/-3.26	5.85		pCi/L					
Cobalt-60	U	2.20	+/-3.62	7.35		pCi/L					
Europium-152	U	2.07	+/-9.56	17.0		pCi/L					
Europium-154	U	0.539	+/-8.56	16.7		pCi/L					
Europium-155	U	-2.63	+/-9.55	17.0		pCi/L					
Iridium-192	U	-1.23	+/-3.48	5.97		pCi/L					
Iron-59	U	-0.0584	+/-7.53	14.4		pCi/L					
Lead-210	U	-260	+/-298	434		pCi/L					
Lead-212	U	6.94	+/-8.29	9.37		pCi/L					
Lead-214	U	5.90	+/-10.4	12.1		pCi/L					
Manganese-54	U	0.821	+/-3.58	5.86		pCi/L					
Mercury-203	U	1.06	+/-4.39	6.95		pCi/L					
Neodymium-147	U	-77.7	+/-77.0	129		pCi/L					
Neptunium-239	U	-1.4	+/-25.6	45.9		pCi/L					
Niobium-94	U	2.94	+/-3.16	5.65		pCi/L					
Niobium-95	U	1.51	+/-3.87	7.33		pCi/L					
Potassium-40	U	-23.7	+/-45.9	63.5		pCi/L					
Promethium-144	U	1.97	+/-3.63	6.13		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377742018	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	1.54	+/-3.99	7.20	pCi/L
Radium-228	U	-10.1	+/-15.7	20.7	pCi/L
Ruthenium-106	U	-19.9	+/-33.8	52.4	pCi/L
Silver-110m	U	0.577	+/-2.87	5.41	pCi/L
Sodium-22	U	-0.744	+/-3.12	5.81	pCi/L
Thallium-208	U	2.24	+/-5.07	5.71	pCi/L
Thorium-230	U	-239	+/-1080	1540	pCi/L
Thorium-234	U	28.0	+/-185	187	pCi/L
Tin-113	U	4.09	+/-4.11	7.82	pCi/L
Uranium-235	U	11.2	+/-23.0	33.7	pCi/L
Uranium-238	U	28.0	+/-185	187	pCi/L
Yttrium-88	U	-1.96	+/-3.05	5.17	pCi/L
Zinc-65	U	3.99	+/-6.40	12.1	pCi/L
Zirconium-95	U	1.26	+/-6.60	12.4	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.09	+/-3.74	4.75	5.00	pCi/L	KXB2	08/14/15	1329	1497331	2
Beta	8.79	+/-2.90	3.66	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-48.2	+/-124	219	300	pCi/L	MYM1	08/16/15	1130	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 30	Project:	WNUC00129
Sample ID:	377742019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:30		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	7.36	+/-19.8	23.1		pCi/L		MJH1	08/05/15	1155 1495870	1
Americium-241	U	6.27	+/-16.6	30.1		pCi/L					
Antimony-124	U	0.423	+/-8.34	16.6		pCi/L					
Antimony-125	U	3.67	+/-8.40	15.6		pCi/L					
Barium-133	U	-0.515	+/-4.52	7.09		pCi/L					
Barium-140	U	-5.61	+/-37.5	66.2		pCi/L					
Beryllium-7	U	-10.8	+/-33.7	58.8		pCi/L					
Bismuth-212	U	27.9	+/-48.2	89.5		pCi/L					
Bismuth-214	U	13.0	+/-13.7	17.7		pCi/L					
Cerium-139	U	-1.43	+/-3.18	5.30		pCi/L					
Cerium-141	U	2.70	+/-8.28	13.0		pCi/L					
Cerium-144	U	-11.9	+/-20.8	34.9		pCi/L					
Cesium-134	U	2.94	+/-3.30	6.69		pCi/L					
Cesium-136	U	8.92	+/-13.8	25.0		pCi/L					
Cesium-137	U	-3.02	+/-3.34	5.39	10.0	pCi/L					
Chromium-51	U	-16.2	+/-43.0	75.9		pCi/L					
Cobalt-56	U	0.505	+/-3.81	7.17		pCi/L					
Cobalt-57	U	1.61	+/-2.63	4.70		pCi/L					
Cobalt-58	U	-0.74	+/-4.12	6.53		pCi/L					
Cobalt-60	U	-0.154	+/-3.90	6.68		pCi/L					
Europium-152	U	2.36	+/-10.1	16.3		pCi/L					
Europium-154	U	0.972	+/-9.46	15.8		pCi/L					
Europium-155	U	-1.34	+/-11.1	19.2		pCi/L					
Iridium-192	U	2.43	+/-3.58	6.72		pCi/L					
Iron-59	U	1.08	+/-7.90	14.9		pCi/L					
Lead-210	U	59.5	+/-697	749		pCi/L					
Lead-212	U	2.00	+/-9.19	9.70		pCi/L					
Lead-214	U	9.88	+/-10.5	11.2		pCi/L					
Manganese-54	U	-2.49	+/-3.73	5.39		pCi/L					
Mercury-203	U	-1.24	+/-4.19	7.45		pCi/L					
Neodymium-147	U	43.2	+/-86.6	161		pCi/L					
Neptunium-239	U	6.29	+/-27.5	48.3		pCi/L					
Niobium-94	U	-2.59	+/-3.19	5.17		pCi/L					
Niobium-95	U	1.05	+/-3.99	7.57		pCi/L					
Potassium-40	U	8.28	+/-52.3	59.2		pCi/L					
Promethium-144	U	-0.532	+/-3.53	6.11		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 30  
Sample ID: 377742019

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.70	+/-4.04	7.59	pCi/L
Radium-228	U	7.36	+/-19.8	23.1	pCi/L
Ruthenium-106	U	29.2	+/-30.3	58.2	pCi/L
Silver-110m	U	1.42	+/-3.26	6.01	pCi/L
Sodium-22	U	0.295	+/-3.35	5.56	pCi/L
Thallium-208	U	3.04	+/-5.19	5.71	pCi/L
Thorium-230	U	4.47	+/-1130	2000	pCi/L
Thorium-234	U	-33.9	+/-193	297	pCi/L
Tin-113	U	-1.16	+/-4.49	7.93	pCi/L
Uranium-235	U	28.6	+/-29.2	38.0	pCi/L
Uranium-238	U	-33.9	+/-193	297	pCi/L
Yttrium-88	U	0.265	+/-3.59	7.18	pCi/L
Zinc-65	U	-12.2	+/-10.6	14.0	pCi/L
Zirconium-95	U	-4.1	+/-6.97	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	12.2	+/-6.74	9.13	5.00	pCi/L	KXB2	08/13/15	1328	1497331	2
Beta	21.7	+/-5.12	6.22	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-16.9	+/-127	223	300	pCi/L	MYM1	08/16/15	1147	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 377742020  
Matrix: Ground Water  
Collect Date: 13-JUL-15 14:25  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	13.4	+/-24.5	27.8		pCi/L		MJH1	08/06/15	0651 1495870	1
Americium-241	U	-47	+/-33.0	54.9		pCi/L					
Antimony-124	U	-14.1	+/-11.4	17.6		pCi/L					
Antimony-125	U	4.39	+/-10.6	17.6		pCi/L					
Barium-133	U	-1.66	+/-5.21	7.95		pCi/L					
Barium-140	U	-1.37	+/-42.2	76.4		pCi/L					
Beryllium-7	U	-26.5	+/-38.5	65.4		pCi/L					
Bismuth-212	U	-7.39	+/-55.5	97.8		pCi/L					
Bismuth-214	U	6.37	+/-13.1	16.2		pCi/L					
Cerium-139	U	0.694	+/-3.52	6.20		pCi/L					
Cerium-141	U	0.0575	+/-8.71	15.2		pCi/L					
Cerium-144	U	6.36	+/-24.7	43.7		pCi/L					
Cesium-134	U	1.27	+/-4.12	7.95		pCi/L					
Cesium-136	U	5.31	+/-16.8	29.1		pCi/L					
Cesium-137	U	2.34	+/-4.22	7.92	10.0	pCi/L					
Chromium-51	U	-31.6	+/-48.1	83.6		pCi/L					
Cobalt-56	U	3.10	+/-4.60	8.28		pCi/L					
Cobalt-57	U	-0.286	+/-3.57	5.46		pCi/L					
Cobalt-58	U	2.34	+/-4.22	8.38		pCi/L					
Cobalt-60	U	-1.88	+/-4.08	7.13		pCi/L					
Europium-152	U	13.5	+/-12.4	21.5		pCi/L					
Europium-154	U	0.479	+/-10.7	20.4		pCi/L					
Europium-155	U	10.1	+/-13.0	23.7		pCi/L					
Iridium-192	U	0.417	+/-5.00	8.09		pCi/L					
Iron-59	U	0.0988	+/-8.80	16.7		pCi/L					
Lead-210	U	1950	+/-1580	2150		pCi/L					
Lead-212	U	1.83	+/-12.9	12.0		pCi/L					
Lead-214	U	13.4	+/-14.4	15.6		pCi/L					
Manganese-54	U	-0.47	+/-3.81	7.03		pCi/L					
Mercury-203	U	1.51	+/-4.91	9.06		pCi/L					
Neodymium-147	U	-80.2	+/-115	171		pCi/L					
Neptunium-239	U	22.3	+/-34.2	61.7		pCi/L					
Niobium-94	U	-0.894	+/-3.63	6.32		pCi/L					
Niobium-95	U	6.74	+/-4.82	9.78		pCi/L					
Potassium-40	U	-10.3	+/-56.2	98.2		pCi/L					
Promethium-144	U	-1.42	+/-3.90	6.71		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32 Project: WNUC00129  
Sample ID: 377742020 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	2.90	+/-4.79	9.04	pCi/L
Radium-228	U	13.4	+/-24.5	27.8	pCi/L
Ruthenium-106	U	23.6	+/-37.0	63.1	pCi/L
Silver-110m	U	-2.27	+/-4.80	6.91	pCi/L
Sodium-22	U	0.0409	+/-3.78	7.18	pCi/L
Thallium-208	U	-3.64	+/-5.10	7.67	pCi/L
Thorium-230	U	-777	+/-1790	3120	pCi/L
Thorium-234	U	-187	+/-307	477	pCi/L
Tin-113	U	-0.166	+/-4.99	9.02	pCi/L
Uranium-235	U	-28.2	+/-27.9	43.0	pCi/L
Uranium-238	U	-187	+/-307	477	pCi/L
Yttrium-88	U	0.762	+/-5.32	10.5	pCi/L
Zinc-65	U	4.59	+/-9.14	17.9	pCi/L
Zirconium-95	U	-4.34	+/-7.75	13.0	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.63	+/-2.74	4.92	5.00	pCi/L	KXB2	08/14/15	1334	1497331	2
Beta		191	+/-10.3	4.23	5.00	pCi/L					
Alpha		8.08	+/-4.16	4.82	5.00	pCi/L	KXB2	08/18/15	0708	1497331	3
Beta		201	+/-8.33	2.81	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	390	+/-144	224	300	pCi/L	MYM1	08/16/15	1204	1497817	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.6	(15%-125%)

Notes:

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 32  
Sample ID: 377742020

Project: WNUC00129  
Client ID: WNUC001

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 33  
Sample ID: 377742021  
Matrix: Ground Water  
Collect Date: 10-JUL-15 08:46  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	U	-9.09	+/-17.2	23.8		pCi/L		MJH1	08/03/15	0902	1496184	1
Americium-241	U	5.39	+/-16.2	26.4		pCi/L						
Antimony-124	U	3.50	+/-9.51	19.5		pCi/L						
Antimony-125	U	-1.12	+/-9.10	16.0		pCi/L						
Barium-133	U	3.76	+/-4.16	7.20		pCi/L						
Barium-140	U	40.0	+/-41.2	79.5		pCi/L						
Beryllium-7	U	4.83	+/-38.6	68.5		pCi/L						
Bismuth-212	U	63.5	+/-98.0	100		pCi/L						
Bismuth-214	U	10.8	+/-10.4	12.4		pCi/L						
Cerium-139	U	-1.38	+/-3.72	5.46		pCi/L						
Cerium-141	U	-1.39	+/-7.46	12.6		pCi/L						
Cerium-144	U	-3.28	+/-20.6	35.1		pCi/L						
Cesium-134	U	0.355	+/-4.48	6.96		pCi/L						
Cesium-136	U	-7.05	+/-15.8	25.2		pCi/L						
Cesium-137	U	4.99	+/-5.85	5.90	10.0	pCi/L						
Chromium-51	U	-69.6	+/-48.0	77.2		pCi/L						
Cobalt-56	U	1.47	+/-4.24	8.01		pCi/L						
Cobalt-57	U	-2.06	+/-2.78	4.60		pCi/L						
Cobalt-58	U	-0.942	+/-3.65	6.56		pCi/L						
Cobalt-60	U	-3.38	+/-3.42	5.56		pCi/L						
Europium-152	U	3.41	+/-10.1	18.4		pCi/L						
Europium-154	U	5.81	+/-8.39	22.9		pCi/L						
Europium-155	U	4.64	+/-10.2	18.2		pCi/L						
Iridium-192	U	3.25	+/-3.66	6.94		pCi/L						
Iron-59	U	-4.85	+/-8.38	14.9		pCi/L						
Lead-210	U	-219	+/-396	607		pCi/L						
Lead-212	U	7.08	+/-10.1	12.2		pCi/L						
Lead-214	U	6.07	+/-15.4	14.9		pCi/L						
Manganese-54	U	-1.05	+/-3.39	6.00		pCi/L						
Mercury-203	U	0.853	+/-4.46	8.07		pCi/L						
Neodymium-147	U	-6.24	+/-92.9	163		pCi/L						
Neptunium-239	U	-9.12	+/-27.5	46.6		pCi/L						
Niobium-94	U	-3.37	+/-3.76	5.87		pCi/L						
Niobium-95	U	4.00	+/-4.09	8.21		pCi/L						
Potassium-40		73.6	+/-43.5	43.6		pCi/L						
Promethium-144	U	-3.35	+/-3.20	5.28		pCi/L						



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 33 Project: WNUC00129  
Sample ID: 377742021 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.98	+/-4.55	7.73	pCi/L
Radium-228	U	-9.09	+/-17.2	23.8	pCi/L
Ruthenium-106	U	17.2	+/-32.7	62.7	pCi/L
Silver-110m	U	-1.41	+/-3.50	5.33	pCi/L
Sodium-22	U	2.06	+/-2.98	6.61	pCi/L
Thallium-208	U	-2.03	+/-4.71	7.55	pCi/L
Thorium-230	UI	0.00	+/-1610	1790	pCi/L
Thorium-234	U	88.9	+/-186	220	pCi/L
Tin-113	U	5.66	+/-6.62	8.72	pCi/L
Uranium-235	U	-7.0	+/-23.4	35.1	pCi/L
Uranium-238	U	88.9	+/-186	220	pCi/L
Yttrium-88	U	-0.696	+/-4.45	8.55	pCi/L
Zinc-65	U	-0.582	+/-6.84	11.7	pCi/L
Zirconium-95	U	0.865	+/-7.08	13.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.99	+/-2.58	4.33	5.00	pCi/L	KXB2	08/14/15	1329	1497331	2
Beta		5.26	+/-2.91	4.26	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-9.39	+/-126	221	300	pCi/L	MYM1	08/16/15	1220	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	377742022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 08:45		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-7.27	+/-17.6	26.3		pCi/L		MJH1	08/03/15	0902 1496184	1
Americium-241	U	14.6	+/-23.4	39.7		pCi/L					
Antimony-124	U	-0.0417	+/-8.34	16.5		pCi/L					
Antimony-125	U	4.48	+/-8.66	16.3		pCi/L					
Barium-133	U	-2.84	+/-4.17	6.14		pCi/L					
Barium-140	U	5.05	+/-34.4	62.6		pCi/L					
Beryllium-7	U	5.17	+/-31.3	57.3		pCi/L					
Bismuth-212	U	-6.75	+/-45.4	83.6		pCi/L					
Bismuth-214	U	4.16	+/-12.9	12.4		pCi/L					
Cerium-139	U	-1.48	+/-2.87	4.80		pCi/L					
Cerium-141	U	0.0564	+/-8.19	10.6		pCi/L					
Cerium-144	U	-7.25	+/-19.8	33.7		pCi/L					
Cesium-134	U	1.53	+/-3.16	6.31		pCi/L					
Cesium-136	U	16.7	+/-11.7	24.0		pCi/L					
Cesium-137	U	0.490	+/-3.36	6.38	10.0	pCi/L					
Chromium-51	U	8.66	+/-37.2	69.1		pCi/L					
Cobalt-56	U	-0.111	+/-4.10	7.56		pCi/L					
Cobalt-57	U	2.25	+/-2.49	4.60		pCi/L					
Cobalt-58	U	1.97	+/-3.78	7.43		pCi/L					
Cobalt-60	U	0.428	+/-2.97	5.36		pCi/L					
Europium-152	U	-3.22	+/-9.00	15.9		pCi/L					
Europium-154	U	5.01	+/-9.25	18.8		pCi/L					
Europium-155	U	-2.0	+/-10.1	17.7		pCi/L					
Iridium-192	U	-3.27	+/-3.23	5.43		pCi/L					
Iron-59	U	2.34	+/-7.40	14.5		pCi/L					
Lead-210	U	315	+/-696	1300		pCi/L					
Lead-212	U	-3.52	+/-6.98	11.2		pCi/L					
Lead-214	U	4.50	+/-10.6	11.2		pCi/L					
Manganese-54	U	-3.33	+/-2.86	4.57		pCi/L					
Mercury-203	U	-6.27	+/-3.87	6.29		pCi/L					
Neodymium-147	U	-23	+/-76.4	133		pCi/L					
Neptunium-239	U	6.70	+/-25.6	45.7		pCi/L					
Niobium-94	U	-0.16	+/-3.07	5.69		pCi/L					
Niobium-95	U	-2.27	+/-5.49	7.73		pCi/L					
Potassium-40	U	-12.9	+/-53.2	95.5		pCi/L					
Promethium-144	U	0.436	+/-3.07	5.82		pCi/L					

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 38 Project: WNUC00129  
Sample ID: 377742022 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-1.57	+/-3.69	6.41	pCi/L
Radium-228	U	-7.27	+/-17.6	26.3	pCi/L
Ruthenium-106	U	-16.3	+/-29.2	48.8	pCi/L
Silver-110m	U	0.699	+/-3.16	5.92	pCi/L
Sodium-22	U	1.83	+/-3.28	6.68	pCi/L
Thallium-208	U	1.84	+/-5.09	5.49	pCi/L
Thorium-230	U	1470	+/-1840	2310	pCi/L
Thorium-234	U	62.0	+/-279	300	pCi/L
Tin-113	U	0.664	+/-3.87	7.16	pCi/L
Uranium-235	U	0.159	+/-23.0	32.0	pCi/L
Uranium-238	U	62.0	+/-279	300	pCi/L
Yttrium-88	U	-2.81	+/-3.45	5.60	pCi/L
Zinc-65	U	-1.21	+/-6.96	12.7	pCi/L
Zirconium-95	U	2.72	+/-6.21	12.3	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.37	+/-2.33	4.21	5.00	pCi/L	KXB2	08/14/15	1331	1497331	2
Beta	U	2.37	+/-2.58	4.28	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-38.9	+/-131	232	300	pCi/L	MYM1	08/16/15	1237	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	377742023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-0.949	+/-19.2	31.9		pCi/L		MJH1	08/03/15	0903 1496184	1
Americium-241	U	-42.1	+/-27.6	45.3		pCi/L					
Antimony-124	U	-2.31	+/-11.8	22.0		pCi/L					
Antimony-125	U	1.32	+/-9.56	17.2		pCi/L					
Barium-133	U	6.63	+/-4.97	8.96		pCi/L					
Barium-140	U	-16.3	+/-38.7	58.5		pCi/L					
Beryllium-7	U	19.6	+/-35.6	69.2		pCi/L					
Bismuth-212	U	-15.8	+/-48.9	86.0		pCi/L					
Bismuth-214	UI	0.00	+/-11.2	17.1		pCi/L					
Cerium-139	U	-1.85	+/-3.34	5.50		pCi/L					
Cerium-141	U	0.844	+/-8.28	12.9		pCi/L					
Cerium-144	U	8.65	+/-21.7	38.7		pCi/L					
Cesium-134	U	-0.975	+/-4.01	7.09		pCi/L					
Cesium-136	U	17.0	+/-13.1	28.7		pCi/L					
Cesium-137	U	2.91	+/-4.23	8.20	10.0	pCi/L					
Chromium-51	U	12.3	+/-47.3	85.8		pCi/L					
Cobalt-56	U	0.802	+/-4.47	8.58		pCi/L					
Cobalt-57	U	0.954	+/-2.63	4.74		pCi/L					
Cobalt-58	U	0.108	+/-4.32	8.20		pCi/L					
Cobalt-60	U	2.83	+/-3.92	8.26		pCi/L					
Europium-152	U	4.35	+/-10.2	18.9		pCi/L					
Europium-154	U	0.502	+/-11.6	22.7		pCi/L					
Europium-155	U	6.39	+/-12.5	22.7		pCi/L					
Iridium-192	U	-0.37	+/-3.87	6.88		pCi/L					
Iron-59	U	5.08	+/-9.73	19.5		pCi/L					
Lead-210	U	-52.4	+/-1200	2210		pCi/L					
Lead-212	U	0.324	+/-10.7	12.6		pCi/L					
Lead-214	U	4.46	+/-12.4	16.8		pCi/L					
Manganese-54	U	-2.51	+/-3.69	6.44		pCi/L					
Mercury-203	U	0.671	+/-4.73	8.54		pCi/L					
Neodymium-147	U	-17.6	+/-80.8	146		pCi/L					
Neptunium-239	U	7.84	+/-30.1	53.5		pCi/L					
Niobium-94	U	-0.434	+/-3.33	6.00		pCi/L					
Niobium-95	U	-3.98	+/-4.31	6.91		pCi/L					
Potassium-40	U	-67.8	+/-58.8	86.5		pCi/L					
Promethium-144	U	-3.03	+/-6.01	7.39		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	377742023	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-3.42	+/-4.65	8.08	pCi/L
Radium-228	U	-0.949	+/-19.2	31.9	pCi/L
Ruthenium-106	U	22.6	+/-37.6	65.2	pCi/L
Silver-110m	U	3.12	+/-4.08	7.95	pCi/L
Sodium-22	U	0.104	+/-4.08	7.99	pCi/L
Thallium-208	U	2.02	+/-5.24	7.28	pCi/L
Thorium-230	U	1580	+/-2430	2950	pCi/L
Thorium-234	U	-217	+/-283	415	pCi/L
Tin-113	U	-2.79	+/-4.77	7.99	pCi/L
Uranium-235	U	-41.6	+/-25.7	35.6	pCi/L
Uranium-238	U	-217	+/-283	415	pCi/L
Yttrium-88	U	4.10	+/-5.12	11.3	pCi/L
Zinc-65	U	-4.27	+/-9.01	15.7	pCi/L
Zirconium-95	U	-2.88	+/-7.78	13.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	3.23	+/-3.15	4.88	5.00	pCi/L	KXB2	08/14/15	1330	1497331	2
Beta		13.3	+/-3.18	3.47	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-35	+/-129	228	300	pCi/L	MYM1	08/16/15	1254	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.2	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377742024  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:53  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-4.81	+/-17.4	24.9		pCi/L		MJH1	08/03/15	0911 1496184	1
Americium-241	U	-3.63	+/-18.6	29.2		pCi/L					
Antimony-124	U	1.26	+/-6.98	14.6		pCi/L					
Antimony-125	U	0.447	+/-8.90	16.0		pCi/L					
Barium-133	U	-2.44	+/-3.86	6.67		pCi/L					
Barium-140	U	-14.3	+/-40.3	69.7		pCi/L					
Beryllium-7	U	7.84	+/-34.2	62.3		pCi/L					
Bismuth-212	U	-15.8	+/-47.3	80.6		pCi/L					
Bismuth-214	U	-9.73	+/-10.2	13.7		pCi/L					
Cerium-139	U	0.875	+/-3.34	5.20		pCi/L					
Cerium-141	UI	0.00	+/-13.8	12.9		pCi/L					
Cerium-144	U	0.378	+/-21.2	36.6		pCi/L					
Cesium-134	U	4.69	+/-3.53	7.32		pCi/L					
Cesium-136	U	-0.429	+/-12.6	23.6		pCi/L					
Cesium-137	U	0.761	+/-3.11	5.70	10.0	pCi/L					
Chromium-51	U	-2.34	+/-43.2	77.9		pCi/L					
Cobalt-56	U	1.53	+/-3.53	6.88		pCi/L					
Cobalt-57	U	-0.262	+/-2.75	4.74		pCi/L					
Cobalt-58	U	1.28	+/-3.49	6.77		pCi/L					
Cobalt-60	U	0.477	+/-3.77	6.61		pCi/L					
Europium-152	U	6.50	+/-9.47	17.7		pCi/L					
Europium-154	U	3.89	+/-8.96	17.7		pCi/L					
Europium-155	U	5.50	+/-10.9	19.5		pCi/L					
Iridium-192	U	-1.72	+/-3.65	6.40		pCi/L					
Iron-59	U	-4.11	+/-8.18	14.3		pCi/L					
Lead-210	U	315	+/-814	704		pCi/L					
Lead-212	U	6.95	+/-10.7	11.6		pCi/L					
Lead-214	U	2.87	+/-8.72	14.4		pCi/L					
Manganese-54	U	-1.44	+/-4.24	6.64		pCi/L					
Mercury-203	U	4.35	+/-5.19	6.86		pCi/L					
Neodymium-147	U	11.7	+/-93.2	168		pCi/L					
Neptunium-239	U	-14.6	+/-26.0	43.8		pCi/L					
Niobium-94	U	-0.296	+/-3.05	5.33		pCi/L					
Niobium-95	U	0.240	+/-4.06	7.56		pCi/L					
Potassium-40	U	40.8	+/-49.8	54.2		pCi/L					
Promethium-144	U	2.02	+/-3.12	5.86		pCi/L					

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377742024

Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.374	+/-3.93	7.00	pCi/L
Radium-228	U	-4.81	+/-17.4	24.9	pCi/L
Ruthenium-106	U	-25.6	+/-30.5	49.9	pCi/L
Silver-110m	U	-5.31	+/-3.81	4.69	pCi/L
Sodium-22	U	1.28	+/-3.16	6.23	pCi/L
Thallium-208	U	-1.42	+/-4.01	6.30	pCi/L
Thorium-230	U	716	+/-1250	2050	pCi/L
Thorium-234	U	113	+/-253	249	pCi/L
Tin-113	U	2.64	+/-4.60	8.56	pCi/L
Uranium-235	UI	0.00	+/-36.5	33.8	pCi/L
Uranium-238	U	113	+/-253	249	pCi/L
Yttrium-88	U	2.15	+/-5.13	10.2	pCi/L
Zinc-65	U	-0.10	+/-7.52	12.1	pCi/L
Zirconium-95	U	2.70	+/-8.10	12.1	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	6.77	+/-4.31	5.27	5.00	pCi/L	KXB2	08/17/15	1343	1497331	2
Beta	22.2	+/-4.21	3.54	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	13.7	+/-128	223	300	pCi/L	MYM1	08/16/15	1310	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	377742025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:31		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	0.208	+/-17.7	19.0		pCi/L		MJH1	08/03/15	0911 1496184	1
Americium-241	U	-3.28	+/-12.7	22.3		pCi/L					
Antimony-124	U	1.53	+/-8.90	17.7		pCi/L					
Antimony-125	U	3.94	+/-7.60	14.3		pCi/L					
Barium-133	U	-3.83	+/-5.51	6.88		pCi/L					
Barium-140	U	11.1	+/-29.0	53.7		pCi/L					
Beryllium-7	U	-9.82	+/-29.6	51.4		pCi/L					
Bismuth-212	U	-37.4	+/-56.4	80.3		pCi/L					
Bismuth-214		15.1	+/-12.3	11.4		pCi/L					
Cerium-139	U	0.499	+/-3.09	4.76		pCi/L					
Cerium-141	U	0.0773	+/-6.59	11.3		pCi/L					
Cerium-144	U	5.11	+/-18.5	32.4		pCi/L					
Cesium-134	U	-2.54	+/-3.63	5.23		pCi/L					
Cesium-136	U	11.3	+/-16.1	21.7		pCi/L					
Cesium-137	U	-3.24	+/-4.13	6.21	10.0	pCi/L					
Chromium-51	U	-27.1	+/-36.9	63.2		pCi/L					
Cobalt-56	U	1.08	+/-3.46	6.65		pCi/L					
Cobalt-57	U	0.262	+/-2.36	4.11		pCi/L					
Cobalt-58	U	-1.3	+/-3.62	5.57		pCi/L					
Cobalt-60	U	-0.149	+/-3.33	6.13		pCi/L					
Europium-152	U	3.89	+/-9.02	16.7		pCi/L					
Europium-154	U	-2.28	+/-10.1	17.5		pCi/L					
Europium-155	U	-1.29	+/-9.30	16.1		pCi/L					
Iridium-192	U	1.65	+/-3.38	6.26		pCi/L					
Iron-59	U	-2.95	+/-7.20	12.7		pCi/L					
Lead-210	U	-128	+/-328	486		pCi/L					
Lead-212	U	7.09	+/-8.77	10.8		pCi/L					
Lead-214	U	11.0	+/-9.78	13.6		pCi/L					
Manganese-54	U	-0.394	+/-2.97	5.46		pCi/L					
Mercury-203	U	1.08	+/-3.73	6.84		pCi/L					
Neodymium-147	U	-29.6	+/-65.6	102		pCi/L					
Neptunium-239	U	21.8	+/-25.5	42.2		pCi/L					
Niobium-94	U	-0.894	+/-3.12	5.64		pCi/L					
Niobium-95	U	-0.0782	+/-3.35	6.25		pCi/L					
Potassium-40	U	-45.2	+/-47.6	71.0		pCi/L					
Promethium-144	U	0.778	+/-3.17	5.99		pCi/L					



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	377742025	Client ID:	WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	-0.732	+/-3.78	6.65	pCi/L
Radium-228	U	0.208	+/-17.7	19.0	pCi/L
Ruthenium-106	U	27.5	+/-45.2	51.8	pCi/L
Silver-110m	U	-2.64	+/-3.13	5.40	pCi/L
Sodium-22	U	-0.754	+/-3.58	6.21	pCi/L
Thallium-208	UI	0.00	+/-7.40	4.85	pCi/L
Thorium-230	U	278	+/-930	1660	pCi/L
Thorium-234	U	-114	+/-149	219	pCi/L
Tin-113	U	3.15	+/-4.20	7.93	pCi/L
Uranium-235	U	1.89	+/-22.0	33.6	pCi/L
Uranium-238	U	-114	+/-149	219	pCi/L
Yttrium-88	U	1.11	+/-3.52	7.35	pCi/L
Zinc-65	U	7.09	+/-6.76	13.1	pCi/L
Zirconium-95	U	0.392	+/-6.52	12.2	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	0.462	+/-1.96	4.15	5.00	pCi/L	KXB2	08/13/15	1332	1497331	2
Beta		7.50	+/-3.35	4.76	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-46.1	+/-123	219	300	pCi/L	MYM1	08/16/15	1327	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	377742026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-24.6	30.5		pCi/L		MJH1	08/03/15	0912	1496184	1
Americium-241	U	3.69	+/-29.9	48.0		pCi/L						
Antimony-124	U	-7.83	+/-10.5	17.6		pCi/L						
Antimony-125	U	3.69	+/-9.97	18.3		pCi/L						
Barium-133	U	0.589	+/-4.99	7.96		pCi/L						
Barium-140	U	-25.2	+/-49.5	71.0		pCi/L						
Beryllium-7	U	34.3	+/-34.3	67.8		pCi/L						
Bismuth-212	U	33.7	+/-48.0	96.4		pCi/L						
Bismuth-214	U	3.72	+/-12.8	16.9		pCi/L						
Cerium-139	U	0.538	+/-3.44	5.91		pCi/L						
Cerium-141	U	-3.23	+/-9.40	13.9		pCi/L						
Cerium-144	U	13.2	+/-25.5	40.6		pCi/L						
Cesium-134	U	-0.902	+/-3.68	6.71		pCi/L						
Cesium-136	U	7.91	+/-15.3	30.8		pCi/L						
Cesium-137	U	0.733	+/-3.68	7.01	10.0	pCi/L						
Chromium-51	U	10.8	+/-47.1	86.4		pCi/L						
Cobalt-56	U	1.40	+/-4.17	8.09		pCi/L						
Cobalt-57	U	-0.217	+/-2.93	4.80		pCi/L						
Cobalt-58	U	0.215	+/-5.24	8.47		pCi/L						
Cobalt-60	U	0.306	+/-3.61	7.17		pCi/L						
Europium-152	U	6.84	+/-9.73	18.5		pCi/L						
Europium-154	U	-0.0871	+/-8.95	17.8		pCi/L						
Europium-155	U	-5.93	+/-12.0	20.1		pCi/L						
Iridium-192	U	1.48	+/-3.71	6.91		pCi/L						
Iron-59	U	0.518	+/-9.34	16.7		pCi/L						
Lead-210	U	-395	+/-1290	1980		pCi/L						
Lead-212	U	6.13	+/-10.6	13.1		pCi/L						
Lead-214	U	8.67	+/-13.0	16.7		pCi/L						
Manganese-54	U	-0.046	+/-3.33	6.24		pCi/L						
Mercury-203	U	-0.105	+/-4.75	8.53		pCi/L						
Neodymium-147	U	76.6	+/-97.4	189		pCi/L						
Neptunium-239	U	41.5	+/-38.1	52.4		pCi/L						
Niobium-94	U	1.52	+/-3.64	6.68		pCi/L						
Niobium-95	U	1.13	+/-4.24	8.14		pCi/L						
Potassium-40	UI	0.00	+/-37.1	9.43		pCi/L						
Promethium-144	U	2.80	+/-3.73	7.36		pCi/L						

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 44 Project: WNUC00129  
Sample ID: 377742026 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammascpec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.844	+/-4.39	7.99	pCi/L
Radium-228	UI	0.00	+/-24.6	30.5	pCi/L
Ruthenium-106	U	20.4	+/-32.2	63.8	pCi/L
Silver-110m	U	-1.22	+/-3.51	6.35	pCi/L
Sodium-22	U	-0.0981	+/-3.16	6.27	pCi/L
Thallium-208	U	-1.61	+/-4.85	7.39	pCi/L
Thorium-230	U	1690	+/-1730	2930	pCi/L
Thorium-234	U	134	+/-317	434	pCi/L
Tin-113	U	2.09	+/-5.04	9.31	pCi/L
Uranium-235	U	-9.02	+/-27.8	38.3	pCi/L
Uranium-238	U	134	+/-317	434	pCi/L
Yttrium-88	U	3.62	+/-5.15	11.1	pCi/L
Zinc-65	U	-3.67	+/-7.31	12.6	pCi/L
Zirconium-95	U	3.88	+/-7.91	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.40	+/-2.50	4.41	5.00	pCi/L	KXB2	08/17/15	1343	1497331	2
Beta	U	-1.71	+/-2.70	5.34	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-97.2	+/-118	214	300	pCi/L	MYM1	08/16/15	1344	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377742027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:00		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	23.9	+/-25.3	28.8		pCi/L		MJH1	08/03/15	0912 1496184	1
Americium-241	U	4.66	+/-27.5	47.7		pCi/L					
Antimony-124	U	-4.94	+/-15.4	24.2		pCi/L					
Antimony-125	U	2.47	+/-12.4	19.5		pCi/L					
Barium-133	U	-2.97	+/-5.21	8.79		pCi/L					
Barium-140	U	-20.8	+/-34.0	60.0		pCi/L					
Beryllium-7	U	30.9	+/-37.9	72.2		pCi/L					
Bismuth-212	U	20.1	+/-52.3	101		pCi/L					
Bismuth-214	U	10.7	+/-14.8	13.1		pCi/L					
Cerium-139	U	-2.38	+/-4.09	6.18		pCi/L					
Cerium-141	U	11.8	+/-17.4	13.1		pCi/L					
Cerium-144	U	-6.27	+/-24.3	43.1		pCi/L					
Cesium-134	U	3.09	+/-5.21	9.07		pCi/L					
Cesium-136	U	-5.84	+/-14.6	25.6		pCi/L					
Cesium-137	U	-5.84	+/-4.03	6.35	10.0	pCi/L					
Chromium-51	U	-11.5	+/-55.4	90.6		pCi/L					
Cobalt-56	U	-0.905	+/-4.93	8.88		pCi/L					
Cobalt-57	U	-1.0	+/-3.29	5.83		pCi/L					
Cobalt-58	U	-2.65	+/-3.74	6.16		pCi/L					
Cobalt-60	U	0.666	+/-4.25	8.44		pCi/L					
Europium-152	U	1.13	+/-11.8	21.0		pCi/L					
Europium-154	U	5.17	+/-10.6	22.3		pCi/L					
Europium-155	U	-3.81	+/-14.3	23.7		pCi/L					
Iridium-192	U	2.68	+/-4.50	8.27		pCi/L					
Iron-59	U	1.41	+/-9.39	17.8		pCi/L					
Lead-210	U	328	+/-961	1700		pCi/L					
Lead-212	U	1.78	+/-9.82	14.1		pCi/L					
Lead-214	U	-4.67	+/-11.3	16.6		pCi/L					
Manganese-54	U	1.19	+/-4.61	8.64		pCi/L					
Mercury-203	U	0.737	+/-4.77	8.54		pCi/L					
Neodymium-147	U	41.2	+/-83.2	160		pCi/L					
Neptunium-239	U	-12.8	+/-33.4	59.3		pCi/L					
Niobium-94	U	-0.433	+/-3.53	6.47		pCi/L					
Niobium-95	U	5.19	+/-4.80	9.72		pCi/L					
Potassium-40	U	2.06	+/-64.3	69.2		pCi/L					
Promethium-144	U	0.140	+/-3.47	6.50		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 47  
Sample ID: 377742027  
Project: WNUC00129  
Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.307	+/-4.99	8.85	pCi/L
Radium-228	U	23.9	+/-25.3	28.8	pCi/L
Ruthenium-106	U	-46.3	+/-40.6	54.7	pCi/L
Silver-110m	U	3.55	+/-3.63	7.41	pCi/L
Sodium-22	U	0.784	+/-3.88	7.84	pCi/L
Thallium-208	U	0.264	+/-6.56	7.46	pCi/L
Thorium-230	U	-1140	+/-1640	2690	pCi/L
Thorium-234	U	-97.8	+/-286	444	pCi/L
Tin-113	U	-0.66	+/-5.35	9.37	pCi/L
Uranium-235	U	35.3	+/-52.1	39.2	pCi/L
Uranium-238	U	-97.8	+/-286	444	pCi/L
Yttrium-88	U	-3.58	+/-5.15	8.76	pCi/L
Zinc-65	U	-1.05	+/-9.70	15.2	pCi/L
Zirconium-95	U	1.43	+/-8.23	15.5	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	2.46	+/-3.12	5.25	5.00	pCi/L	KXB2	08/13/15	1330	1497331	2
Beta		80.8	+/-7.72	5.01	5.00	pCi/L					
Alpha	U	1.03	+/-2.54	4.61	5.00	pCi/L	KXB2	08/14/15	1331	1497331	3
Beta		78.0	+/-6.84	3.61	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	28.5	+/-126	218	300	pCi/L	MYM1	08/16/15	1400	1497817	4
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	EPA 900.0/SW846 9310	
4	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.8	(15%-125%)

Notes:

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

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Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377742027	Client ID:	WNUC001

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	377742028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	-5.31	+/-16.3	23.0		pCi/L		MJH1	08/03/15	0912 1496184	1
Americium-241	U	6.24	+/-12.3	19.5		pCi/L					
Antimony-124	U	2.22	+/-10.3	20.3		pCi/L					
Antimony-125	U	-4.21	+/-7.93	13.3		pCi/L					
Barium-133	U	5.48	+/-7.42	8.08		pCi/L					
Barium-140	U	5.07	+/-42.3	69.0		pCi/L					
Beryllium-7	U	16.6	+/-29.7	57.6		pCi/L					
Bismuth-212	U	58.6	+/-41.7	80.0		pCi/L					
Bismuth-214	U	8.81	+/-11.3	12.6		pCi/L					
Cerium-139	U	1.92	+/-2.90	5.34		pCi/L					
Cerium-141	U	8.04	+/-7.33	12.5		pCi/L					
Cerium-144	UI	0.00	+/-18.2	29.7		pCi/L					
Cesium-134	U	-1.19	+/-3.14	5.53		pCi/L					
Cesium-136	U	-0.799	+/-14.2	25.7		pCi/L					
Cesium-137	U	0.714	+/-3.27	6.12	10.0	pCi/L					
Chromium-51	U	-38.3	+/-44.6	73.5		pCi/L					
Cobalt-56	U	2.42	+/-3.96	7.64		pCi/L					
Cobalt-57	U	-0.511	+/-2.20	3.93		pCi/L					
Cobalt-58	U	-1.85	+/-3.77	6.53		pCi/L					
Cobalt-60	U	-2.39	+/-4.05	7.07		pCi/L					
Europium-152	U	4.80	+/-8.96	16.4		pCi/L					
Europium-154	U	-1.56	+/-9.13	17.1		pCi/L					
Europium-155	U	-5.41	+/-10.0	15.4		pCi/L					
Iridium-192	U	-1.6	+/-3.56	6.07		pCi/L					
Iron-59	U	6.57	+/-8.82	17.9		pCi/L					
Lead-210	U	-160	+/-296	441		pCi/L					
Lead-212	U	1.15	+/-8.43	10.8		pCi/L					
Lead-214	U	2.33	+/-8.46	12.3		pCi/L					
Manganese-54	U	2.61	+/-3.07	6.13		pCi/L					
Mercury-203	U	2.76	+/-4.15	7.62		pCi/L					
Neodymium-147	U	-45	+/-95.3	158		pCi/L					
Neptunium-239	U	1.48	+/-23.9	43.3		pCi/L					
Niobium-94	U	-1.18	+/-3.28	4.94		pCi/L					
Niobium-95	U	0.500	+/-3.89	7.19		pCi/L					
Potassium-40		64.7	+/-49.7	58.0		pCi/L					
Promethium-144	U	5.62	+/-3.98	7.04		pCi/L					

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## Certificate of Analysis

Report Date: August 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Contact: Columbia, South Carolina 29205  
Project: Ms. Cynthia Logsdon  
Ground Water Well Liquid Analysis

Client Sample ID: WELL 48 Project: WNUC00129  
Sample ID: 377742028 Client ID: WNUC001

### Rad Gamma Spec Analysis

#### Gammasec, Gamma, Liquid (Standard List) "As Received"

Promethium-146	U	0.300	+/-3.85	6.79	pCi/L
Radium-228	U	-5.31	+/-16.3	23.0	pCi/L
Ruthenium-106	U	8.57	+/-32.4	53.5	pCi/L
Silver-110m	U	-3.56	+/-3.23	5.28	pCi/L
Sodium-22	U	0.0844	+/-3.10	5.99	pCi/L
Thallium-208	U	-0.265	+/-4.21	6.75	pCi/L
Thorium-230	U	-434	+/-1090	1540	pCi/L
Thorium-234	U	142	+/-206	167	pCi/L
Tin-113	U	-1.93	+/-4.24	7.17	pCi/L
Uranium-235	U	0.463	+/-19.8	33.6	pCi/L
Uranium-238	U	142	+/-206	167	pCi/L
Yttrium-88	U	-1.39	+/-4.32	7.78	pCi/L
Zinc-65	U	-5.01	+/-7.35	12.8	pCi/L
Zirconium-95	U	-1.89	+/-6.95	11.6	pCi/L

### Rad Gas Flow Proportional Counting

#### GFPC, Gross Alpha Liquid "As Received"

Alpha	U	1.91	+/-2.44	4.12	5.00	pCi/L	KXB2	08/14/15	1331	1497331	2
Beta		6.43	+/-2.91	3.98	5.00	pCi/L					

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-5.77	+/-126	220	300	pCi/L	MYM1	08/16/15	1417	1497817	3
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	
3	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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).



# GEL LABORATORIES LLC

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## QC Summary

Report Date: August 18, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 377742

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1495870										
QC1203362670	377742001	DUP									
Actinium-228	U	-5.67	U	12.8	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-15.4		+/-16.7							
Americium-241	U	18.2	U	-20.2	pCi/L	N/A		N/A			
	Uncertainty	+/-21.9		+/-20.1							
Antimony-124	U	-1.12	U	1.68	pCi/L	N/A		N/A			
	Uncertainty	+/-9.35		+/-12.0							
Antimony-125	U	-7.68	U	-0.776	pCi/L	N/A		N/A			
	Uncertainty	+/-8.24		+/-11.2							
Barium-133	U	0.346	U	-2.89	pCi/L	N/A		N/A			
	Uncertainty	+/-4.41		+/-5.54							
Barium-140	U	-9.65	U	43.3	pCi/L	N/A		N/A			
	Uncertainty	+/-42.1		+/-63.4							
Beryllium-7	U	-21.9	U	16.1	pCi/L	N/A		N/A			
	Uncertainty	+/-35.8		+/-47.1							
Bismuth-212	U	46.1	U	-50.9	pCi/L	N/A		N/A			
	Uncertainty	+/-45.0		+/-67.4							
Bismuth-214	UI	0.00	U	6.46	pCi/L	N/A		N/A			
	Uncertainty	+/-11.9		+/-9.94							
Cerium-139	U	-0.638	U	-3.62	pCi/L	N/A		N/A			
	Uncertainty	+/-3.02		+/-4.31							
Cerium-141	U	-1.22	U	3.41	pCi/L	N/A		N/A			
	Uncertainty	+/-7.62		+/-9.90							
Cerium-144	U	3.42	U	-5.53	pCi/L	N/A		N/A			
	Uncertainty	+/-18.9		+/-28.2							
Cesium-134	U	3.90	U	1.07	pCi/L	N/A		N/A			
	Uncertainty	+/-5.04		+/-4.72							
Cesium-136	U	8.40	U	7.13	pCi/L	N/A		N/A			
	Uncertainty	+/-15.4		+/-21.0							
Cesium-137	UI	0.00	U	0.0218	pCi/L	N/A		N/A			
	Uncertainty	+/-4.52		+/-4.35							
Chromium-51	U	-14.6	U	-34.8	pCi/L	N/A		N/A			
	Uncertainty	+/-47.4		+/-63.0							
Cobalt-56	U	-0.251	U	-0.872	pCi/L	N/A		N/A			
	Uncertainty	+/-3.78		+/-5.14							
Cobalt-57	U	1.17	U	1.11	pCi/L	N/A		N/A			
	Uncertainty	+/-2.55		+/-3.80							
Cobalt-58	U	-2.78	U	4.92	pCi/L	N/A		N/A			
	Uncertainty	+/-3.85		+/-5.34							
Cobalt-60	U	-0.0457	U	-2.82	pCi/L	N/A		N/A			
	Uncertainty	+/-3.10		+/-3.88							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Europium-152	U	-3.76	U	14.5	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-9.42		+/-14.2							
Europium-154	U	8.54	U	10.8	pCi/L	N/A		N/A			
	Uncertainty	+/-9.53		+/-10.5							
Europium-155	U	-1.86	U	9.62	pCi/L	N/A		N/A			
	Uncertainty	+/-10.4		+/-12.8							
Iridium-192	U	1.11	U	0.273	pCi/L	N/A		N/A			
	Uncertainty	+/-3.85		+/-4.85							
Iron-59	U	-0.275	U	-3.14	pCi/L	N/A		N/A			
	Uncertainty	+/-9.29		+/-10.7							
Lead-210	U	609	U	453	pCi/L	N/A		N/A			
	Uncertainty	+/-724		+/-739							
Lead-212	U	5.81	U	-0.576	pCi/L	N/A		N/A			
	Uncertainty	+/-8.84		+/-8.92							
Lead-214	U	9.90	U	12.5	pCi/L	N/A		N/A			
	Uncertainty	+/-12.9		+/-10.9							
Manganese-54	U	0.354	U	1.76	pCi/L	N/A		N/A			
	Uncertainty	+/-3.21		+/-4.69							
Mercury-203	U	-1.38	U	0.693	pCi/L	N/A		N/A			
	Uncertainty	+/-3.99		+/-6.70							
Neodymium-147	U	52.0	U	-67.5	pCi/L	N/A		N/A			
	Uncertainty	+/-98.3		+/-144							
Neptunium-239	U	17.1	U	-7.18	pCi/L	N/A		N/A			
	Uncertainty	+/-26.3		+/-33.4							
Niobium-94	U	-2.65	U	0.861	pCi/L	N/A		N/A			
	Uncertainty	+/-3.09		+/-4.18							
Niobium-95	U	-1.77	U	0.0465	pCi/L	N/A		N/A			
	Uncertainty	+/-5.77		+/-5.22							
Potassium-40	U	16.9	U	-39.2	pCi/L	N/A		N/A			
	Uncertainty	+/-41.1		+/-49.6							
Promethium-144	U	-0.167	U	-1.42	pCi/L	N/A		N/A			
	Uncertainty	+/-3.49		+/-4.22							
Promethium-146	U	2.07	U	0.564	pCi/L	N/A		N/A			
	Uncertainty	+/-3.82		+/-4.94							
Radium-228	U	-5.67	U	12.8	pCi/L	N/A		N/A			
	Uncertainty	+/-15.4		+/-16.7							
Ruthenium-106	U	-32.3	U	-8.66	pCi/L	N/A		N/A			
	Uncertainty	+/-30.1		+/-39.7							
Silver-110m	U	0.333	U	-0.439	pCi/L	N/A		N/A			
	Uncertainty	+/-3.01		+/-4.37							
Sodium-22	U	2.97	U	2.94	pCi/L	N/A		N/A			
	Uncertainty	+/-3.37		+/-3.85							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Thallium-208	U	0.537	U	-3.68	pCi/L	N/A		N/A			
	Uncertainty	+/-5.66		+/-5.02							
Thorium-230	U	1110	U	1060	pCi/L	N/A		N/A	MJH1	08/06/15	06:51
	Uncertainty	+/-1700		+/-1480							
Thorium-234		311	U	-14.9	pCi/L	5.48		(0% - 100%)			
	Uncertainty	+/-263		+/-212							
Tin-113	U	0.995	U	-0.0199	pCi/L	N/A		N/A			
	Uncertainty	+/-4.39		+/-6.12							
Uranium-235	U	-3.7	U	14.6	pCi/L	N/A		N/A			
	Uncertainty	+/-24.9		+/-31.4							
Uranium-238		311	U	-14.9	pCi/L	5.48		(0% - 100%)			
	Uncertainty	+/-263		+/-212							
Yttrium-88	U	-0.603	U	4.04	pCi/L	N/A		N/A			
	Uncertainty	+/-4.05		+/-4.91							
Zinc-65	U	-4.25	U	-1.48	pCi/L	N/A		N/A			
	Uncertainty	+/-7.59		+/-8.30							
Zirconium-95	U	-5.26	U	5.91	pCi/L	N/A		N/A			
	Uncertainty	+/-7.27		+/-11.3							
QC1203362671	LCS										
Actinium-228			U	424	pCi/L					08/06/15	06:52
	Uncertainty			+/-1040							
Americium-241	1.10E+05			1.20E+05	pCi/L		108	(75%-125%)			
	Uncertainty			+/-3460							
Antimony-124			U	-135	pCi/L						
	Uncertainty			+/-180							
Antimony-125			U	183	pCi/L						
	Uncertainty			+/-553							
Barium-133			U	-30.8	pCi/L						
	Uncertainty			+/-227							
Barium-140			U	-617	pCi/L						
	Uncertainty			+/-1030							
Beryllium-7			U	-543	pCi/L						
	Uncertainty			+/-1860							
Bismuth-212			U	-903	pCi/L						
	Uncertainty			+/-2930							
Bismuth-214			U	-65	pCi/L						
	Uncertainty			+/-367							
Cerium-139			U	108	pCi/L						
	Uncertainty			+/-178							
Cerium-141			U	36.8	pCi/L						
	Uncertainty			+/-242							
Cerium-144			U	-261	pCi/L						
	Uncertainty			+/-1060							
Cesium-134			U	-10.2	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Cesium-136			U	+/-234 -195	pCi/L				MJH1	08/06/15	06:52
	Uncertainty			+/-514							
Cesium-137	43900			45600	pCi/L		104	(75%-125%)			
	Uncertainty			+/-888							
Chromium-51		U		975	pCi/L						
	Uncertainty			+/-1610							
Cobalt-56		U		-93.8	pCi/L						
	Uncertainty			+/-247							
Cobalt-57				1920	pCi/L						
	Uncertainty			+/-220							
Cobalt-58		U		-74.4	pCi/L						
	Uncertainty			+/-232							
Cobalt-60	48800			51000	pCi/L		104	(75%-125%)			
	Uncertainty			+/-1120							
Europium-152		U		466	pCi/L						
	Uncertainty			+/-521							
Europium-154		U		351	pCi/L						
	Uncertainty			+/-344							
Europium-155		U		-50.6	pCi/L						
	Uncertainty			+/-519							
Iridium-192		U		21.0	pCi/L						
	Uncertainty			+/-168							
Iron-59		U		24.0	pCi/L						
	Uncertainty			+/-577							
Lead-210				1.14E+06	pCi/L						
	Uncertainty			+/-1.47E+05							
Lead-212		U		104	pCi/L						
	Uncertainty			+/-279							
Lead-214		U		-76.5	pCi/L						
	Uncertainty			+/-391							
Manganese-54		U		-22.8	pCi/L						
	Uncertainty			+/-226							
Mercury-203		U		20.5	pCi/L						
	Uncertainty			+/-173							
Neodymium-147		U		-209	pCi/L						
	Uncertainty			+/-1960							
Neptunium-239		U		-679	pCi/L						
	Uncertainty			+/-1410							
Niobium-94		U		-58.5	pCi/L						
	Uncertainty			+/-194							
Niobium-95		U		10.8	pCi/L						
	Uncertainty			+/-207							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Potassium-40			U	-279	pCi/L						
	Uncertainty			+/-829							
Promethium-144			U	42.8	pCi/L				MJH1	08/06/15	06:52
	Uncertainty			+/-170							
Promethium-146			U	143	pCi/L						
	Uncertainty			+/-309							
Radium-228			U	424	pCi/L						
	Uncertainty			+/-1040							
Ruthenium-106			U	-176	pCi/L						
	Uncertainty			+/-1700							
Silver-110m				4150	pCi/L						
	Uncertainty			+/-315							
Sodium-22			U	127	pCi/L						
	Uncertainty			+/-121							
Thallium-208			U	87.6	pCi/L						
	Uncertainty			+/-195							
Thorium-230			U	33100	pCi/L						
	Uncertainty			+/-82600							
Thorium-234			U	-12200	pCi/L						
	Uncertainty			+/-11600							
Tin-113			U	252	pCi/L						
	Uncertainty			+/-245							
Uranium-235			U	-232	pCi/L						
	Uncertainty			+/-874							
Uranium-238			U	-12200	pCi/L						
	Uncertainty			+/-11600							
Yttrium-88			U	-45.8	pCi/L						
	Uncertainty			+/-98.5							
Zinc-65				5220	pCi/L						
	Uncertainty			+/-988							
Zirconium-95			U	-104	pCi/L						
	Uncertainty			+/-365							
QC1203362669	MB										
Actinium-228			U	-4.65	pCi/L					08/06/15	06:51
	Uncertainty			+/-13.9							
Americium-241			U	2.93	pCi/L						
	Uncertainty			+/-15.4							
Antimony-124			U	3.20	pCi/L						
	Uncertainty			+/-7.59							
Antimony-125			U	-0.182	pCi/L						
	Uncertainty			+/-8.82							
Barium-133			U	2.76	pCi/L						
	Uncertainty			+/-4.07							
Barium-140			U	12.8	pCi/L						
	Uncertainty										

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1495870										
Beryllium-7	Uncertainty		U	+/-18.9	pCi/L				MJH1	08/06/15	06:51
				24.1							
Bismuth-212	Uncertainty		U	+/-32.6	pCi/L						
				-12.9							
Bismuth-214	Uncertainty		U	+/-45.5	pCi/L						
				0.544							
Cerium-139	Uncertainty		U	+/-9.31	pCi/L						
				1.63							
Cerium-141	Uncertainty		U	+/-2.70	pCi/L						
				-5.7							
Cerium-144	Uncertainty		U	+/-6.29	pCi/L						
				2.63							
Cesium-134	Uncertainty		U	+/-17.7	pCi/L						
				-0.489							
Cesium-136	Uncertainty		U	+/-4.07	pCi/L						
				1.77							
Cesium-137	Uncertainty		U	+/-8.46	pCi/L						
				-1.67							
Chromium-51	Uncertainty		U	+/-3.26	pCi/L						
				-14.9							
Cobalt-56	Uncertainty		U	+/-29.8	pCi/L						
				2.06							
Cobalt-57	Uncertainty		U	+/-3.43	pCi/L						
				2.11							
Cobalt-58	Uncertainty		U	+/-2.43	pCi/L						
				-0.0497							
Cobalt-60	Uncertainty		U	+/-2.67	pCi/L						
				-2.33							
Europium-152	Uncertainty		U	+/-2.80	pCi/L						
				-8.72							
Europium-154	Uncertainty		U	+/-11.4	pCi/L						
				-6.66							
Europium-155	Uncertainty		U	+/-7.53	pCi/L						
				0.400							
Iridium-192	Uncertainty		U	+/-9.72	pCi/L						
				1.88							
Iron-59	Uncertainty		U	+/-3.04	pCi/L						
				-5.33							
Lead-210	Uncertainty		U	+/-7.04	pCi/L						
				133							
Lead-212	Uncertainty		U	+/-554	pCi/L						
				4.48							
	Uncertainty			+/-7.96							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Lead-214			U	8.16	pCi/L						
	Uncertainty			+/-12.1							
Manganese-54			U	-1.68	pCi/L				MJH1	08/06/15	06:51
	Uncertainty			+/-3.31							
Mercury-203			U	0.537	pCi/L						
	Uncertainty			+/-3.30							
Neodymium-147			U	-34.9	pCi/L						
	Uncertainty			+/-34.9							
Neptunium-239			U	-9.86	pCi/L						
	Uncertainty			+/-24.3							
Niobium-94			U	2.41	pCi/L						
	Uncertainty			+/-3.35							
Niobium-95			U	1.41	pCi/L						
	Uncertainty			+/-3.39							
Potassium-40			U	28.4	pCi/L						
	Uncertainty			+/-53.0							
Promethium-144			U	-3.33	pCi/L						
	Uncertainty			+/-5.96							
Promethium-146			U	1.20	pCi/L						
	Uncertainty			+/-3.79							
Radium-228			U	-4.65	pCi/L						
	Uncertainty			+/-13.9							
Ruthenium-106			U	-7.14	pCi/L						
	Uncertainty			+/-29.4							
Silver-110m			U	0.0959	pCi/L						
	Uncertainty			+/-2.70							
Sodium-22			U	-2.28	pCi/L						
	Uncertainty			+/-2.66							
Thallium-208			U	1.90	pCi/L						
	Uncertainty			+/-4.81							
Thorium-230			U	894	pCi/L						
	Uncertainty			+/-1380							
Thorium-234			U	16.5	pCi/L						
	Uncertainty			+/-158							
Tin-113			U	1.63	pCi/L						
	Uncertainty			+/-4.01							
Uranium-235			U	-7.91	pCi/L						
	Uncertainty			+/-23.2							
Uranium-238			U	16.5	pCi/L						
	Uncertainty			+/-158							
Yttrium-88			U	1.83	pCi/L						
	Uncertainty			+/-4.04							
Zinc-65			U	-5.06	pCi/L						
	Uncertainty			+/-7.56							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1495870										
Zirconium-95			U	0.550	pCi/L						
	Uncertainty			+/-5.02							
Batch	1496184										
QC1203363416 378049003 DUP											
Actinium-228	U	-1.53	U	2.22	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-12.0		+/-9.36							
Americium-241	U	16.7	U	-0.133	pCi/L	N/A		N/A			
	Uncertainty	+/-13.6		+/-15.7							
Antimony-124	U	-1.17	U	-1.67	pCi/L	N/A		N/A			
	Uncertainty	+/-6.20		+/-6.23							
Antimony-125	U	7.54	U	-1.22	pCi/L	N/A		N/A			
	Uncertainty	+/-8.25		+/-6.83							
Barium-133	U	-1.13	U	-0.809	pCi/L	N/A		N/A			
	Uncertainty	+/-3.52		+/-3.24							
Barium-140	U	8.52	U	-1.83	pCi/L	N/A		N/A			
	Uncertainty	+/-13.6		+/-16.9							
Beryllium-7	U	-18.5	U	16.4	pCi/L	N/A		N/A			
	Uncertainty	+/-26.0		+/-21.2							
Bismuth-212	U	-24.2	U	10.1	pCi/L	N/A		N/A			
	Uncertainty	+/-32.9		+/-33.1							
Bismuth-214	U	1.18	U	3.54	pCi/L	N/A		N/A			
	Uncertainty	+/-8.24		+/-7.67							
Cerium-139	U	1.09	U	-0.576	pCi/L	N/A		N/A			
	Uncertainty	+/-2.40		+/-2.55							
Cerium-141	U	-3.02	U	2.10	pCi/L	N/A		N/A			
	Uncertainty	+/-5.61		+/-5.35							
Cerium-144	U	2.09	U	6.05	pCi/L	N/A		N/A			
	Uncertainty	+/-17.2		+/-18.7							
Cesium-134	U	-3.94	U	-1.74	pCi/L	N/A		N/A			
	Uncertainty	+/-2.89		+/-2.59							
Cesium-136	U	0.936	U	0.484	pCi/L	N/A		N/A			
	Uncertainty	+/-5.52		+/-5.88							
Cesium-137	U	0.434	U	-0.133	pCi/L	N/A		N/A			
	Uncertainty	+/-2.57		+/-2.79							
Chromium-51	U	-9.01	U	0.410	pCi/L	N/A		N/A			
	Uncertainty	+/-23.6		+/-25.0							
Cobalt-56	U	-0.42	U	-0.435	pCi/L	N/A		N/A			
	Uncertainty	+/-2.45		+/-2.74							
Cobalt-57	U	1.27	U	-0.147	pCi/L	N/A		N/A			
	Uncertainty	+/-2.11		+/-2.34							
Cobalt-58	U	0.704	U	0.414	pCi/L	N/A		N/A			
	Uncertainty	+/-2.49		+/-2.18							
Cobalt-60	U	-0.743	U	-3.76	pCi/L	N/A		N/A			
	Uncertainty	+/-2.86		+/-2.73							



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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Europium-152	U	-4.04	U	-5.02	pCi/L	N/A		N/A			
	Uncertainty	+/-7.07		+/-7.51							
Europium-154	U	7.32	U	1.70	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-9.11		+/-5.61							
Europium-155	U	-1.28	U	1.36	pCi/L	N/A		N/A			
	Uncertainty	+/-9.27		+/-9.50							
Iridium-192	U	-1.16	U	0.278	pCi/L	N/A		N/A			
	Uncertainty	+/-2.92		+/-2.38							
Iron-59	U	2.97	U	-1.43	pCi/L	N/A		N/A			
	Uncertainty	+/-4.89		+/-5.31							
Lead-210	U	-345	U	-59.1	pCi/L	N/A		N/A			
	Uncertainty	+/-415		+/-427							
Lead-212	U	3.13	U	2.99	pCi/L	N/A		N/A			
	Uncertainty	+/-5.50		+/-6.64							
Lead-214	U	5.28	U	-4.98	pCi/L	N/A		N/A			
	Uncertainty	+/-8.09		+/-6.38							
Manganese-54	U	1.61	U	0.762	pCi/L	N/A		N/A			
	Uncertainty	+/-2.40		+/-2.55							
Mercury-203	U	-1.02	U	2.69	pCi/L	N/A		N/A			
	Uncertainty	+/-2.87		+/-2.98							
Neodymium-147	U	13.7	U	-6.88	pCi/L	N/A		N/A			
	Uncertainty	+/-27.3		+/-32.7							
Neptunium-239	U	5.80	U	-3.3	pCi/L	N/A		N/A			
	Uncertainty	+/-23.8		+/-25.2							
Niobium-94	U	0.353	U	-1.27	pCi/L	N/A		N/A			
	Uncertainty	+/-2.57		+/-2.29							
Niobium-95	U	-1.35	U	-0.112	pCi/L	N/A		N/A			
	Uncertainty	+/-2.23		+/-2.26							
Potassium-40	U	-30.3	U	-26.3	pCi/L	N/A		N/A			
	Uncertainty	+/-33.4		+/-34.0							
Promethium-144	U	-2.1	U	0.049	pCi/L	N/A		N/A			
	Uncertainty	+/-2.61		+/-2.32							
Promethium-146	U	-0.0111	U	2.44	pCi/L	N/A		N/A			
	Uncertainty	+/-3.38		+/-2.99							
Radium-228	U	-1.53	U	2.22	pCi/L	N/A		N/A			
	Uncertainty	+/-12.0		+/-9.36							
Ruthenium-106	U	13.6	U	18.3	pCi/L	N/A		N/A			
	Uncertainty	+/-21.7		+/-23.4							
Silver-110m	U	-2.14	U	-1.16	pCi/L	N/A		N/A			
	Uncertainty	+/-2.23		+/-2.51							
Sodium-22	U	2.58	U	0.551	pCi/L	N/A		N/A			
	Uncertainty	+/-3.21		+/-1.97							
Thallium-208	U	-2.31	U	2.30	pCi/L	N/A		N/A			
	Uncertainty	+/-3.40		+/-4.08							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Thorium-230		1910	U	292	pCi/L	11.1		(0% - 100%)			
	Uncertainty	+/-1440		+/-1040							
Thorium-234	U	126	U	158	pCi/L	N/A		N/A	MJH1	08/04/15	06:33
	Uncertainty	+/-166		+/-171							
Tin-113	U	-1.81	U	0.779	pCi/L	N/A		N/A			
	Uncertainty	+/-3.12		+/-3.24							
Uranium-235	U	-9.34	U	20.8	pCi/L	N/A		N/A			
	Uncertainty	+/-20.2		+/-22.7							
Uranium-238	U	126	U	158	pCi/L	N/A		N/A			
	Uncertainty	+/-166		+/-171							
Yttrium-88	U	0.849	U	0.633	pCi/L	N/A		N/A			
	Uncertainty	+/-3.43		+/-2.89							
Zinc-65	U	-0.548	U	-3.11	pCi/L	N/A		N/A			
	Uncertainty	+/-4.98		+/-4.98							
Zirconium-95	U	-2.39	U	0.564	pCi/L	N/A		N/A			
	Uncertainty	+/-4.34		+/-3.96							
QC1203363417	LCS										
Actinium-228			U	408	pCi/L					08/04/15	07:04
	Uncertainty			+/-372							
Americium-241	34400			36400	pCi/L		106	(75%-125%)			
	Uncertainty			+/-952							
Antimony-124			U	-8.95	pCi/L						
	Uncertainty			+/-56.4							
Antimony-125			U	-4.24	pCi/L						
	Uncertainty			+/-202							
Barium-133			U	-13.1	pCi/L						
	Uncertainty			+/-85.7							
Barium-140			U	-54.8	pCi/L						
	Uncertainty			+/-289							
Beryllium-7			U	190	pCi/L						
	Uncertainty			+/-629							
Bismuth-212			U	-122	pCi/L						
	Uncertainty			+/-1030							
Bismuth-214			U	28.7	pCi/L						
	Uncertainty			+/-144							
Cerium-139			U	56.0	pCi/L						
	Uncertainty			+/-65.2							
Cerium-141			U	-137	pCi/L						
	Uncertainty			+/-103							
Cerium-144			U	-371	pCi/L						
	Uncertainty			+/-470							
Cesium-134			U	30.3	pCi/L						
	Uncertainty			+/-76.3							
Cesium-136			U	85.7	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Cesium-137	13700			+/-137							
	Uncertainty			14200	pCi/L		104	(75%-125%)	MJH1	08/04/15	07:04
				+/-300							
Chromium-51			U	75.7	pCi/L						
	Uncertainty			+/-587							
Cobalt-56			U	37.9	pCi/L						
	Uncertainty			+/-78.3							
Cobalt-57				605	pCi/L						
	Uncertainty			+/-65.9							
Cobalt-58			U	51.9	pCi/L						
	Uncertainty			+/-72.7							
Cobalt-60	15200			15100	pCi/L		99.2	(75%-125%)			
	Uncertainty			+/-340							
Europium-152			U	49.6	pCi/L						
	Uncertainty			+/-194							
Europium-154			U	74.8	pCi/L						
	Uncertainty			+/-115							
Europium-155			U	-31.3	pCi/L						
	Uncertainty			+/-220							
Iridium-192			U	-29.8	pCi/L						
	Uncertainty			+/-64.5							
Iron-59			U	-194	pCi/L						
	Uncertainty			+/-164							
Lead-210				3.88E+05	pCi/L						
	Uncertainty			+/-12100							
Lead-212			U	-33.5	pCi/L						
	Uncertainty			+/-113							
Lead-214			U	96.0	pCi/L						
	Uncertainty			+/-146							
Manganese-54			U	23.4	pCi/L						
	Uncertainty			+/-70.8							
Mercury-203			U	21.3	pCi/L						
	Uncertainty			+/-66.2							
Neodymium-147			U	-321	pCi/L						
	Uncertainty			+/-562							
Neptunium-239			U	585	pCi/L						
	Uncertainty			+/-636							
Niobium-94			U	-39.6	pCi/L						
	Uncertainty			+/-56.7							
Niobium-95			U	15.6	pCi/L						
	Uncertainty			+/-68.8							
Potassium-40			U	28.9	pCi/L						
	Uncertainty			+/-269							

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Promethium-144			U	10.2	pCi/L						
	Uncertainty			+/-58.9							
Promethium-146			U	-8.46	pCi/L				MJH1	08/04/15	07:04
	Uncertainty			+/-97.1							
Radium-228			U	408	pCi/L						
	Uncertainty			+/-372							
Ruthenium-106			U	-57.8	pCi/L						
	Uncertainty			+/-568							
Silver-110m				179	pCi/L						
	Uncertainty			+/-79.0							
Sodium-22			U	25.2	pCi/L						
	Uncertainty			+/-40.4							
Thallium-208			U	-30.6	pCi/L						
	Uncertainty			+/-65.0							
Thorium-230			U	26000	pCi/L						
	Uncertainty			+/-21900							
Thorium-234			U	-2030	pCi/L						
	Uncertainty			+/-2650							
Tin-113			U	46.0	pCi/L						
	Uncertainty			+/-89.2							
Uranium-235			U	-155	pCi/L						
	Uncertainty			+/-402							
Uranium-238			U	-2030	pCi/L						
	Uncertainty			+/-2650							
Yttrium-88			U	22.9	pCi/L						
	Uncertainty			+/-28.4							
Zinc-65				1740	pCi/L						
	Uncertainty			+/-351							
Zirconium-95			U	27.3	pCi/L						
	Uncertainty			+/-125							
QC1203363415	MB										
Actinium-228			U	-6.56	pCi/L					08/04/15	06:33
	Uncertainty			+/-11.2							
Americium-241			U	-14.7	pCi/L						
	Uncertainty			+/-17.7							
Antimony-124			U	-4.06	pCi/L						
	Uncertainty			+/-6.15							
Antimony-125			U	-3.72	pCi/L						
	Uncertainty			+/-6.11							
Barium-133			U	-2.01	pCi/L						
	Uncertainty			+/-2.84							
Barium-140			U	0.679	pCi/L						
	Uncertainty			+/-10.4							
Beryllium-7			U	12.1	pCi/L						
	Uncertainty										

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	1496184										
Bismuth-212	Uncertainty		U	+/-17.7	pCi/L				MJH1	08/04/15	06:33
				-11.4							
Bismuth-214	Uncertainty		U	+/-29.1	pCi/L						
				1.17							
Cerium-139	Uncertainty		U	+/-6.09	pCi/L						
				-1.91							
Cerium-141	Uncertainty		U	+/-1.93	pCi/L						
				2.24							
Cerium-144	Uncertainty		U	+/-3.19	pCi/L						
				-6.32							
Cesium-134	Uncertainty		U	+/-11.8	pCi/L						
				-0.174							
Cesium-136	Uncertainty		U	+/-2.79	pCi/L						
				-2.8							
Cesium-137	Uncertainty		U	+/-3.68	pCi/L						
				0.290							
Chromium-51	Uncertainty		U	+/-2.25	pCi/L						
				15.3							
Cobalt-56	Uncertainty		U	+/-23.0	pCi/L						
				-0.684							
Cobalt-57	Uncertainty		U	+/-2.17	pCi/L						
				1.99							
Cobalt-58	Uncertainty		U	+/-1.66	pCi/L						
				-0.202							
Cobalt-60	Uncertainty		U	+/-2.50	pCi/L						
				-0.089							
Europium-152	Uncertainty		U	+/-2.13	pCi/L						
				2.91							
Europium-154	Uncertainty		U	+/-6.02	pCi/L						
				-3.67							
Europium-155	Uncertainty		U	+/-7.03	pCi/L						
				-4.06							
Iridium-192	Uncertainty		U	+/-7.28	pCi/L						
				-0.775							
Iron-59	Uncertainty		U	+/-2.11	pCi/L						
				2.33							
Lead-210	Uncertainty		U	+/-3.93	pCi/L						
				653							
Lead-212	Uncertainty		U	+/-679	pCi/L						
				0.970							
Lead-214	Uncertainty		U	+/-5.45	pCi/L						
				1.86							
	Uncertainty			+/-6.19							

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1496184										
Manganese-54			U	-0.327	pCi/L						
	Uncertainty			+/-1.86							
Mercury-203			U	1.17	pCi/L				MJH1	08/04/15	06:33
	Uncertainty			+/-2.06							
Neodymium-147			U	-11.4	pCi/L						
	Uncertainty			+/-19.6							
Neptunium-239			U	3.58	pCi/L						
	Uncertainty			+/-19.5							
Niobium-94			U	1.52	pCi/L						
	Uncertainty			+/-2.22							
Niobium-95			U	0.296	pCi/L						
	Uncertainty			+/-1.96							
Potassium-40			U	-8.45	pCi/L						
	Uncertainty			+/-31.7							
Promethium-144			UI	0.00	pCi/L						
	Uncertainty			+/-3.66							
Promethium-146			U	-1.01	pCi/L						
	Uncertainty			+/-2.62							
Radium-228			U	-6.56	pCi/L						
	Uncertainty			+/-11.2							
Ruthenium-106			U	-9.69	pCi/L						
	Uncertainty			+/-17.9							
Silver-110m			U	1.15	pCi/L						
	Uncertainty			+/-1.78							
Sodium-22			U	-1.15	pCi/L						
	Uncertainty			+/-2.45							
Thallium-208			U	-0.683	pCi/L						
	Uncertainty			+/-2.73							
Thorium-230			U	-756	pCi/L						
	Uncertainty			+/-1090							
Thorium-234			U	109	pCi/L						
	Uncertainty			+/-195							
Tin-113			U	1.56	pCi/L						
	Uncertainty			+/-2.55							
Uranium-235			U	-6.41	pCi/L						
	Uncertainty			+/-15.6							
Uranium-238			U	109	pCi/L						
	Uncertainty			+/-195							
Yttrium-88			U	1.67	pCi/L						
	Uncertainty			+/-2.63							
Zinc-65			U	-3.22	pCi/L						
	Uncertainty			+/-4.63							
Zirconium-95			U	-3.05	pCi/L						
	Uncertainty			+/-3.20							

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1497329										
QC1203366357	377742003	DUP									
Alpha				17.5		7.10	pCi/L	26.1	(0% - 100%)	KXB2	08/14/15 19:26
				Uncertainty		+/-9.58		+/-2.80			
Beta				102		135	pCi/L	12.8	(0%-20%)		
				Uncertainty		+/-12.3		+/-4.78			
QC1203366358	LCS										
Alpha				120		135	pCi/L		113	(75%-125%)	08/13/15 16:44
				Uncertainty		+/-12.7					
Beta				436		475	pCi/L		109	(75%-125%)	
				Uncertainty		+/-17.9					
QC1203366356	MB										
Alpha					U	0.0252	pCi/L				08/13/15 16:44
					Uncertainty	+/-1.59					
Beta					U	1.12	pCi/L				
					Uncertainty	+/-2.75					
Batch	1497331										
QC1203366360	377742023	DUP									
Alpha				U	3.23	U	3.41	pCi/L	N/A	N/A	KXB2 08/14/15 13:34
				Uncertainty	+/-3.15		+/-3.11				
Beta					13.3		11.5	pCi/L	14.3	(0% - 100%)	
					Uncertainty	+/-3.18		+/-2.93			
QC1203366361	LCS										
Alpha					120		128	pCi/L		107	(75%-125%) 08/13/15 13:26
					Uncertainty		+/-12.9				
Beta					436		514	pCi/L		118	(75%-125%)
					Uncertainty		+/-19.4				
QC1203366359	MB										
Alpha					U	0.652	pCi/L				08/14/15 13:31
					Uncertainty	+/-1.45					
Beta					U	-1.99	pCi/L				
					Uncertainty	+/-2.63					
Rad Liquid Scintillation											
Batch	1497815										
QC1203367506	377532001	DUP									
Technetium-99				U	-60.1	U	4.46	pCi/L	N/A	N/AMYM1	08/11/15 23:30
				Uncertainty	+/-122		+/-126				
QC1203367507	LCS										
Technetium-99					4300		3710	pCi/L		86.2	(75%-125%) 08/11/15 23:47
					Uncertainty		+/-242				
QC1203367505	MB										
Technetium-99						U	-6.89	pCi/L			08/11/15 23:14
					Uncertainty		+/-131				
Batch	1497817										
QC1203367509	377742011	DUP									
Technetium-99				U	32.4	U	-60.6	pCi/L	N/A	N/AMYM1	08/16/15 14:50
				Uncertainty	+/-130		+/-126				

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## QC Summary

Workorder: 377742

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1497817										
QC1203367510	LCS										
Technetium-99	4300			3610	pCi/L		83.8	(75%-125%)	MYM1	08/17/15	09:00
	Uncertainty			+/-230							
QC1203367508	MB										
Technetium-99			U	2.42	pCi/L					08/16/15	14:34
	Uncertainty			+/-130							

### 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 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, 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

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## QC Summary

Workorder: 377742

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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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 18 August 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

**Enclosure f)**

**GEL Lab Reports  
Tritium Results**



November 05, 2014

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 358799

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Sarah Edwards for  
Richard Albee  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358799

VENDOR: General Engineering Laboratories (GEL)Month: OctYear: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	10/6/14 10:05	250				X		REC
WELL	#3A	10/8/14 09:42	250				X		REC
WELL	#7	10/7/14 11:33	250				X		REC
WELL	#10	10/7/14 11:55	250				X		REC
WELL	#13R	10/7/14 11:10	250				X		REC
WELL	#14	10/6/14 14:15	250				X		REC
WELL	#15	10/6/14 12:22	250				X		REC
WELL	#16	10/6/14 14:30	250				X		REC
WELL	#17	10/8/14 11:50	250				X		REC
WELL	#18	10/7/14 10:12	250				X		REC
WELL	#20	10/7/14 14:07	250				X		REC
WELL	#22	10/7/14 09:54	250				X		REC
WELL	#23R	10/6/14 13:50	250				X		REC
WELL	#24	10/6/14 09:07	250				X		REC
WELL	#26	10/6/14 10:42	250				X		REC
WELL	#27	10/6/14 14:45	250				X		REC
WELL	#28	10/7/14 10:42	250				X		REC
WELL	#29	10/7/14 09:11	250				X		REC
WELL	#30	10/7/14 19:31	250				X		REC
WELL	#32	10/7/14 14:37	250				X		REC
WELL	#33	10/6/14 11:36	250				X		REC
WELL	#38	10/7/14 08:47	250				X		REC
WELL	#39	10/8/14 14:07	250				X		REC
WELL	#41R	10/6/14 10:22	250				X		REC
WELL	#43	10/8/14 14:30	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is receivedTechnician: Randy CrewsDate Shipped: 10/9/14

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Received:  
Chris Kasey  
10/10/14 09:10

# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

## Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

358799

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2014

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

[illegible]

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: **Randy Crews**

Date Shipped: **10/9/14**

Received:  
Chase George  
10/10/14 09:10

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Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>Westinghouse</u>			SDG/AR/COC/Work Order: <u>358799</u>		
Received By: <u>CAS</u>			Date Received: <u>10/10/14</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0 cpm</u>		
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?		
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>			
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.		
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>			

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>(None)</u> Other (describe) *all temperatures are recorded in Celsius <u>23°C</u>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>13041029102</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground <u>(UPS)</u> Field Services Courier Other  <u>1Z 222 210 01 9622 8251</u> <u>1Z 222 210 01 9514 8269</u>

Comments (Use Continuation Form if needed):



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 358799 GEL Work Order: 358799

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Richard Albee.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2

Sample ID: 358799001

Matrix: Water

Collect Date: 06-OCT-14 10:05

Receive Date: 10-OCT-14

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-141	+/-287	550	700	pCi/L		BYS1	10/29/14	1918	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	358799002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 09:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Liquid "As Received"											
Tritium	U	145	+/-338	593	700	pCi/L		BYS1	10/29/14	1934 1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	358799003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:33		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	176	+/-330	573	700	pCi/L		BYS1	10/29/14	1950	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	358799004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 11:55		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	2.23	+/-316	578	700	pCi/L		BYS1	10/29/14	2007	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R  
Sample ID: 358799005  
Matrix: Water  
Collect Date: 07-OCT-14 11:10  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	143	+/-325	569	700	pCi/L		BYS1	10/29/14	2023	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	358799006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:15		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	275	+/-350	593	700	pCi/L		BYS1	10/29/14	2039	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	358799007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:22		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	272	+/-343	582	700	pCi/L		BYS1	10/29/14	2056	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	358799008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.2	+/-315	583	700	pCi/L		BYS1	10/29/14	2112	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	358799009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 11:50		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-73.9	+/-306	573	700	pCi/L		BYS1	10/29/14	2128	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	358799010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:12		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	159	+/-328	573	700	pCi/L		BYS1	10/29/14	2145	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	358799011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.8	+/-316	586	700	pCi/L		BYS1	10/29/14	2201	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	358799012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:54		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-143	+/-308	588	700	pCi/L		BYS1	10/29/14	2217	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R  
Sample ID: 358799013  
Matrix: Water  
Collect Date: 06-OCT-14 13:50  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	161	+/-339	591	700	pCi/L		BYS1	10/29/14	2234	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	358799014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 09:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	226	+/-342	588	700	pCi/L		BYS1	10/29/14	2250	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	358799015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	34.3	+/-324	586	700	pCi/L		BYS1	10/29/14	2306	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	358799016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 14:45		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-78.5	+/-314	588	700	pCi/L		BYS1	10/29/14	2323	1429940	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	358799017	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 10:42		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-161	+/-371	695	700	pCi/L		BYS1	10/31/14	0433	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	358799018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 09:11		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-359	+/-355	696	700	pCi/L		BYS1	10/31/14	0449	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	358799019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 19:31		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-410	+/-342	681	700	pCi/L		BYS1	10/31/14	0505	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	358799020	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 14:37		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-74.8	+/-369	678	700	pCi/L		BYS1	10/31/14	0522	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	358799021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:36		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-250	+/-358	684	700	pCi/L		BYS1	10/31/14	0538	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	358799022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	07-OCT-14 08:47		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-201	+/-362	684	700	pCi/L		BYS1	10/31/14	0554	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	358799023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:07		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-284	+/-351	677	700	pCi/L		BYS1	10/31/14	0611	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R  
Sample ID: 358799024  
Matrix: Water  
Collect Date: 06-OCT-14 10:22  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-123	+/-365	677	700	pCi/L		BYS1	10/31/14	0627	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	358799025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 14:30		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-310	+/-357	693	700	pCi/L		BYS1	10/31/14	0643	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	358799026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 12:00		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-179	+/-369	694	700	pCi/L		BYS1	10/31/14	0700	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	358799027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	08-OCT-14 10:25		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-155	+/-364	680	700	pCi/L		BYS1	10/31/14	0716	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	358799028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	06-OCT-14 11:05		
Receive Date:	10-OCT-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	32.1	+/-384	690	700	pCi/L		BYS1	10/31/14	0732	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 3A Dupl  
Sample ID: 358799029  
Matrix: Water  
Collect Date: 08-OCT-14 09:42  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-128	+/-375	697	700	pCi/L		BYS1	10/31/14	0749	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R Dupl

Sample ID: 358799030

Matrix: Water

Collect Date: 07-OCT-14 11:10

Receive Date: 10-OCT-14

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	84.4	+/-278	491	700	pCi/L		BYS1	11/03/14	1829	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: November 5, 2014

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 38 Dupl  
Sample ID: 358799031  
Matrix: Water  
Collect Date: 07-OCT-14 08:47  
Receive Date: 10-OCT-14  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	385	+/-416	696	700	pCi/L		BYS1	10/31/14	0821	1429941	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: November 5, 2014

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 358799

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1429940										
QC1203193936	358799001	DUP									
Tritium		U	-141	U	-78.9	pCi/L	N/A		N/A	BYS1	10/29/14 23:55
		Uncertainty	+/-287		+/-315						
QC1203193938	LCS										
Tritium		1900			1720	pCi/L	90.6	(75%-125%)			10/30/14 00:28
		Uncertainty			+/-439						
QC1203193935	MB										
Tritium				U	81.8	pCi/L					10/29/14 23:39
		Uncertainty			+/-326						
QC1203193937	358799001	MS									
Tritium		1900	U	-141	1840	pCi/L	96.7	(75%-125%)			10/30/14 00:12
		Uncertainty			+/-466						
Batch	1429941										
QC1203193940	358799017	DUP									
Tritium		U	-161	U	220	pCi/L	N/A		N/A	BYS1	11/03/14 18:50
		Uncertainty	+/-371		+/-288						
QC1203193942	LCS										
Tritium		1900			1960	pCi/L	103	(75%-125%)			10/31/14 09:27
		Uncertainty			+/-509						
QC1203193939	MB										
Tritium				U	-277	pCi/L					10/31/14 08:38
		Uncertainty			+/-360						
QC1203193941	358799017	MS									
Tritium		1900	U	-161	1780	pCi/L	93.4	(75%-125%)			10/31/14 09:10
		Uncertainty			+/-510						

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 358799

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 05 November 2014**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-14-9
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790



February 13, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 365773

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 26, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.: ROF-06-007-1  
REVISION: 8  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06-10-13

3764

VENDOR: General Engineering Laboratories (GEL)

Month: Oct

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

365773

NOTE: Filter each sample prior to radiological analysis. Acidify the sample following filtration. If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan.

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	1/12/15 10:34	250				X		REC
WELL	#3A	1/21/15 11:36	250				X		REC
WELL	#7	1/19/15 13:56	250				X		REC
WELL	#10	1/19/15 14:15	250				X		REC
WELL	#13R	1/19/15 11:39	250				X		REC
WELL	#14	1/20/15 14:27	250				X		REC
WELL	#15	1/20/15 11:14	250				X		REC
WELL	#16	1/20/15 11:33	250				X		REC
WELL	#17	1/20/15 09:20	250				X		REC
WELL	#18	1/19/15 10:38	250				X		REC
WELL	#20	1/21/15 10:40	250				X		REC
WELL	#22	1/19/15 10:16	250				X		REC
WELL	#23R	1/20/15 14:03	250				X		REC
WELL	#24	1/20/15 08:45	250				X		REC
WELL	#26	1/12/15 10:12	250				X		REC
WELL	#27	1/21/15 11:05	250				X		REC
WELL	#28	1/19/15 11:14	250				X		REC
WELL	#29	1/19/15 09:33	250				X		REC
WELL	#30	1/19/15 09:53	250				X		REC
WELL	#32	1/19/15 14:38	250				X		REC
WELL	#33	1/20/15 10:26	250				X		REC
WELL	#38	1/19/15 09:05	250				X		REC
WELL	#39	1/20/15 09:44	250				X		REC
WELL	#41R	1/12/15 10:52	250				X		REC
WELL	#43	1/20/15 10:07	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 1/23/15

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Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.

Rec'd: Handwritten Signature 26 JAN 15 0925





Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WESTING HOUSE</u>		SDG/AR/COC/Work Order: <u>365772, 365773</u>	
Received By: <u>GUS CHANDLER</u>		Date Received: <u>26 JAN 15</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags    Blue ice    Dry ice    None    Other (describe) <u>13°C</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462966</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken    Damaged container    Leaking container    Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air    FedEx Ground <u>UPS</u> Field Services    Courier    Other  <u>12 222 210 03 9024 5392</u> <u>12 222 210 03 9012 5986</u>

Comments (Use Continuation Form if needed):



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 365773 GEL Work Order: 365773

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL RW-2  
Sample ID: 365773001  
Matrix: Water  
Collect Date: 12-JAN-15 10:34  
Receive Date: 26-JAN-15  
Collector: Client

Project: WNUC00127  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	21.2	+/-311	565	700	pCi/L		BYS1	02/06/15	2354	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 3A	Project:	WNUC00127
Sample ID:	365773002	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:36		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	51.3	+/-315	568	700	pCi/L		BYS1	02/07/15	0011	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 7	Project:	WNUC00127
Sample ID:	365773003	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 13:56		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	115	+/-322	570	700	pCi/L		BYS1	02/07/15	0027	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 10	Project:	WNUC00127
Sample ID:	365773004	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 14:15		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	50.6	+/-321	578	700	pCi/L		BYS1	02/07/15	0043	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 13R

Project: WNUC00127

Sample ID: 365773005

Client ID: WNUC001

Matrix: Water

Collect Date: 19-JAN-15 11:39

Receive Date: 26-JAN-15

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	336	+/-343	572	700	pCi/L		BYS1	02/07/15	0059	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 14	Project:	WNUC00127
Sample ID:	365773006	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 14:27		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-45.6	+/-312	579	700	pCi/L		BYS1	02/07/15	0116	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 15	Project:	WNUC00127
Sample ID:	365773007	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:14		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	81.7	+/-326	582	700	pCi/L		BYS1	02/07/15	0132	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 16	Project:	WNUC00127
Sample ID:	365773008	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 11:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	337	+/-346	576	700	pCi/L		BYS1	02/07/15	0148	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 17	Project:	WNUC00127
Sample ID:	365773009	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:20		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	50.2	+/-325	585	700	pCi/L		BYS1	02/07/15	0205	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 18	Project:	WNUC00127
Sample ID:	365773010	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:38		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	257	+/-335	569	700	pCi/L		BYS1	02/07/15	0221	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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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: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 20	Project:	WNUC00127
Sample ID:	365773011	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 10:40		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	19.2	+/-319	580	700	pCi/L		BYS1	02/07/15	0237	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 22	Project:	WNUC00127
Sample ID:	365773012	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 10:16		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	175	+/-318	552	700	pCi/L		BYS1	02/07/15	0254	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 23R

Sample ID: 365773013

Matrix: Water

Collect Date: 20-JAN-15 14:03

Receive Date: 26-JAN-15

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	81.7	+/-324	579	700	pCi/L		BYS1	02/07/15	0310	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 24	Project:	WNUC00127
Sample ID:	365773014	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 08:45		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	164	+/-333	580	700	pCi/L		BYS1	02/07/15	0326	1454245	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 26	Project:	WNUC00127
Sample ID:	365773015	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 10:12		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	4.07	+/-336	612	700	pCi/L		BYS1	02/06/15	1353	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 27	Project:	WNUC00127
Sample ID:	365773016	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 11:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	432	+/-371	607	700	pCi/L		BYS1	02/06/15	1410	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 29	Project:	WNUC00127
Sample ID:	365773018	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:33		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-84.1	+/-323	603	700	pCi/L		BYS1	02/06/15	1426	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 30	Project:	WNUC00127
Sample ID:	365773019	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:53		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	21.6	+/-338	612	700	pCi/L		BYS1	02/06/15	1442	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 33	Project:	WNUC00127
Sample ID:	365773021	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:26		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	109	+/-342	605	700	pCi/L		BYS1	02/06/15	1459	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 38	Project:	WNUC00127
Sample ID:	365773022	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	19-JAN-15 09:05		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	157	+/-359	628	700	pCi/L		BYS1	02/06/15	1515	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 39	Project:	WNUC00127
Sample ID:	365773023	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 09:44		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	20.2	+/-337	611	700	pCi/L		BYS1	02/06/15	1531	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID: WELL 41R

Sample ID: 365773024

Matrix: Water

Collect Date: 12-JAN-15 10:52

Receive Date: 26-JAN-15

Collector: Client

Project: WNUC00127

Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-91.2	+/-329	615	700	pCi/L		BYS1	02/06/15	1548	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 43	Project:	WNUC00127
Sample ID:	365773025	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:07		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-15.2	+/-341	625	700	pCi/L		BYS1	02/06/15	1604	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 44	Project:	WNUC00127
Sample ID:	365773026	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	20-JAN-15 10:54		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-13	+/-325	595	700	pCi/L		BYS1	02/06/15	1620	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 47	Project:	WNUC00127
Sample ID:	365773027	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	21-JAN-15 09:43		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	40.5	+/-340	614	700	pCi/L		BYS1	02/06/15	1637	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 13, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 48	Project:	WNUC00127
Sample ID:	365773028	Client ID:	WNUC001
Matrix:	Water		
Collect Date:	12-JAN-15 09:55		
Receive Date:	26-JAN-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-48.7	+/-329	608	700	pCi/L		BYS1	02/06/15	1653	1454246	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: February 13, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 365773

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1454245										
QC1203255055	365773001	DUP									
Tritium		U	21.2	U	67.9	pCi/L	N/A		N/A	BYS1	02/07/15 03:59
		Uncertainty	+/-311		+/-317						
QC1203255057	LCS										
Tritium		1870			1950	pCi/L	105	(75%-125%)			02/07/15 04:32
		Uncertainty			+/-466						
QC1203255054	MB										
Tritium				U	50.8	pCi/L					02/07/15 03:43
		Uncertainty			+/-317						
QC1203255056	365773001	MS									
Tritium		1870	U	21.2	1640	pCi/L	87.5	(75%-125%)			02/07/15 04:15
		Uncertainty		+/-311	+/-446						
Batch	1454246										
QC1203255064	365773015	DUP									
Tritium		U	4.07	U	-159	pCi/L	N/A		N/A	BYS1	02/06/15 17:26
		Uncertainty	+/-336		+/-319						
QC1203255066	LCS										
Tritium		1870			1410	pCi/L	75.3	(75%-125%)			02/06/15 17:58
		Uncertainty			+/-439						
QC1203255063	MB										
Tritium				U	-253	pCi/L					02/06/15 17:09
		Uncertainty			+/-310						
QC1203255065	365773015	MS									
Tritium		1870	U	4.07	2130	pCi/L	114	(75%-125%)			02/06/15 17:42
		Uncertainty		+/-336	+/-494						

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 365773

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 13 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12



February 24, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Environmental 2014 - PO 4500633068  
Work Order: 366457

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 04, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500633068  
Enclosures









Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>366456, 366457</u>
Received By: <u>P. Went</u>		Date Received: <u>2-4-15</u>
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?	<input type="checkbox"/> <input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0/cpm</u>
Classified Radioactive II or III by RSO?	<input type="checkbox"/> <input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?	<input type="checkbox"/> <input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input type="checkbox"/> <input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?	<input type="checkbox"/> <input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?	<input type="checkbox"/> <input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Ice bags</u> Blue ice Dry ice None Other (describe) *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>130462966</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS Field Services <u>Courier</u> Other  <u>Self Courier</u>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 366457 GEL Work Order: 366457

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 24, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 28	Project:	WNUC00127
Sample ID:	366457001	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	29-JAN-15 11:15		
Receive Date:	04-FEB-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	330	+/-321	534	700	pCi/L		BYS1	02/16/15	1313	1456871	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: February 24, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Environmental 2014 - PO 4500633068

Client Sample ID:	WELL 32	Project:	WNUC00127
Sample ID:	366457002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	29-JAN-15 11:40		
Receive Date:	04-FEB-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-35.3	+/-295	530	700	pCi/L		BYS1	02/16/15	1344	1456871	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: February 24, 2015

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 366457

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1456871										
QC1203262323	366457001	DUP									
Tritium		U	330	U	-30.5	pCi/L	N/A		N/A	BYS1	02/16/15 14:48
		Uncertainty	+/-321		+/-301						
QC1203262325	LCS										
Tritium		1860			1800	pCi/L	96.3	(75%-125%)			02/16/15 15:51
		Uncertainty			+/-397						
QC1203262322	MB										
Tritium			U		90.6	pCi/L					02/16/15 14:16
		Uncertainty			+/-304						
QC1203262324	366457001	MS									
Tritium		1870	U	330	2070	pCi/L	111	(75%-125%)			02/16/15 15:19
		Uncertainty	+/-321		+/-412						

### 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 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, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 366457

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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.

**There are no "Data Exception Reports" associated with this analytical report.**



**List of current GEL Certifications as of 24 February 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122014-16
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12



May 18, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Ground Water Well Liquid Analysis  
Work Order: 371596

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: April

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

NOTE: Filter each sample prior to radiological analysis. ~~Acidify the sample following filtration.~~ If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan. *ZHF 04/22/15*

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	4/9/15 09:46	250				X		REC
WELL	#3A	4/16/15 09:18	250				X		REC
WELL	#7	4/13/15 11:28	250				X		REC
WELL	#10	4/13/15 11:43	250				X		REC
WELL	#13R	4/13/15 11:08	250				X		REC
WELL	#14	4/14/15 11:37	250				X		REC
WELL	#15	4/14/15 10:55	250				X		REC
WELL	#16	4/14/15 11:52	250				X		REC
WELL	#17	4/14/15 09:01	250				X		REC
WELL	#18	4/13/15 10:17	250				X		REC
WELL	#20	4/16/15 10:05	250				X		REC
WELL	#22	4/13/15 09:58	250				X		REC
WELL	#23R	4/14/15 11:13	250				X		REC
WELL	#24	4/14/15 08:26	250				X		REC
WELL	#26	4/9/15 10:57	250				X		REC
WELL	#27	4/16/15 09:40	250				X		REC
WELL	#28	4/13/15 10:40	250				X		REC
WELL	#29	4/13/15 09:19	250				X		REC
WELL	#30	4/13/15 09:38	250				X		REC
WELL	#32	4/13/15 12:03	250				X		REC
WELL	#33	4/14/15 10:10	250				X		REC
WELL	#38	4/13/15 08:57	250				X		REC
WELL	#39	4/14/15 09:28	250				X		REC
WELL	#41R	4/9/15 10:09	250				X		REC
WELL	#43	4/14/15 09:50	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews *R Crews*

Date Shipped: 4/22/15

Printed Copies are Uncontrolled

*DATE - 4-22-15 TIME - 16:30*

Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.





Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client:		SDG/AR/COC/Work Order: 371596	
Received By: P. J. Dent		Date Received: 4.22.15	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0/cpm
Classified Radioactive II or III by RSO?		X	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		X	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		X	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		X		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius 17c
2a	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): 201404336
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	Do Low Level Perchlorate samples (EPA 6850) have headspace as required?		X		Sample ID's and containers affected:
7	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
8	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
9	Samples received within holding time?	X			ID's and tests affected:
10	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
11	Date & time on COC match date & time on bottles?	X			Sample ID's affected:
12	Number of containers received match number indicated on COC?	X			Sample ID's affected:
13	Are sample containers identifiable as GEL provided?			X	
14	COC form is properly signed in relinquished/received sections?	X			
15	Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS <u>Field Services</u> <u>Courier</u> Other  Gels

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 371596 GEL Work Order: 371596

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 371596001  
Matrix: Ground Water  
Collect Date: 09-APR-15 09:46  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	57.8	+/-338	608	700	pCi/L		GXR1	05/14/15	1213	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 3A	Project:	WNUC00129
Sample ID:	371596002	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:18		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	320	+/-364	611	700	pCi/L		GXR1	05/14/15	1229	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	371596003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	49.5	+/-347	625	700	pCi/L		GXR1	05/14/15	1245	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	371596004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 11:43		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	115	+/-354	626	700	pCi/L		GXR1	05/14/15	1302	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 371596005  
Matrix: Ground Water  
Collect Date: 13-APR-15 11:08  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	164	+/-357	625	700	pCi/L		GXR1	05/14/15	1318	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	371596006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:37		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-135	+/-328	621	700	pCi/L		GXR1	05/14/15	1334	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	371596007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:55		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-67.7	+/-336	625	700	pCi/L		GXR1	05/14/15	1350	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	371596008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 11:52		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	96.2	+/-347	617	700	pCi/L		GXR1	05/14/15	1407	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	371596009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:01		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	31.0	+/-343	621	700	pCi/L		GXR1	05/14/15	1423	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	371596010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 10:17		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-35.7	+/-338	623	700	pCi/L		GXR1	05/14/15	1439	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	371596011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 10:05		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	306	+/-364	614	700	pCi/L		GXR1	05/14/15	1455	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	371596012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:58		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-67.3	+/-338	628	700	pCi/L		GXR1	05/14/15	1512	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 371596013  
Matrix: Ground Water  
Collect Date: 14-APR-15 11:13  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-101	+/-329	618	700	pCi/L		GXR1	05/14/15	1528	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	371596014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 08:26		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-101	+/-331	621	700	pCi/L		GXR1	05/14/15	1544	1476970	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	371596015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	18.6	+/-306	546	700	pCi/L		GXR1	05/16/15	0313	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	371596016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 09:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-152	+/-290	538	700	pCi/L		GXR1	05/16/15	0344	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	371596017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 10:40		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-128	+/-304	560	700	pCi/L		GXR1	05/16/15	0416	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	371596018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:19		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	68.9	+/-290	510	700	pCi/L		GXR1	05/16/15	0447	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 30	Project:	WNUC00129
Sample ID:	371596019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 09:38		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-258	+/-318	601	700	pCi/L		GXR1	05/16/15	0518	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 32	Project:	WNUC00129
Sample ID:	371596020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 12:03		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-25.1	+/-355	656	700	pCi/L		GXR1	05/14/15	2340	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 33	Project:	WNUC00129
Sample ID:	371596021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:10		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-186	+/-299	558	700	pCi/L		GXR1	05/16/15	0549	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	371596022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-APR-15 08:57		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	66.9	+/-301	530	700	pCi/L		GXR1	05/16/15	0620	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	371596023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:28		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	99.8	+/-298	521	700	pCi/L		GXR1	05/16/15	0651	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 371596024  
Matrix: Ground Water  
Collect Date: 09-APR-15 10:09  
Receive Date: 22-APR-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-18.6	+/-283	508	700	pCi/L		GXR1	05/16/15	0722	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	371596025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 09:50		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-152	+/-290	538	700	pCi/L		GXR1	05/16/15	0753	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	371596026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	14-APR-15 10:34		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	29.9	+/-302	537	700	pCi/L		GXR1	05/16/15	0825	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	371596027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-APR-15 11:21		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-85	+/-279	510	700	pCi/L		GXR1	05/16/15	0856	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: May 18, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	371596028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	09-APR-15 10:35		
Receive Date:	22-APR-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-20.3	+/-286	514	700	pCi/L		GXR1	05/16/15	0927	1476971	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: May 18, 2015

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 371596

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1476970										
QC1203313903	371596001	DUP									
Tritium	U	57.8	U	-39.6	pCi/L	N/A			N/A GXR1	05/14/15	16:17
	Uncertainty	+/-338		+/-328							
QC1203313905	LCS										
Tritium	1840			1830	pCi/L		99.6	(75%-125%)		05/14/15	16:49
	Uncertainty			+/-481							
QC1203313902	MB										
Tritium			U	154	pCi/L					05/14/15	16:01
	Uncertainty			+/-361							
QC1203313904	371596001	MS									
Tritium	1850 U	57.8		1860	pCi/L		101	(75%-125%)		05/14/15	16:33
	Uncertainty	+/-338		+/-486							
Batch	1476971										
QC1203313907	371596015	DUP									
Tritium	U	18.6	U	-169	pCi/L	N/A			N/A GXR1	05/16/15	10:29
	Uncertainty	+/-306		+/-268							
QC1203313909	LCS										
Tritium	1840			1630	pCi/L		88.6	(75%-125%)		05/15/15	02:53
	Uncertainty			+/-567							
QC1203313906	MB										
Tritium			U	-72.7	pCi/L					05/16/15	09:58
	Uncertainty			+/-295							
QC1203313908	371596015	MS									
Tritium	1850 U	18.6		1810	pCi/L		97.9	(75%-125%)		05/15/15	02:37
	Uncertainty	+/-306		+/-544							

### 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 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

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 371596

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 18 May 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

August 06, 2015

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

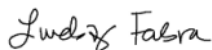
Re: Ground Water Well Liquid Analysis  
Work Order: 377746

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 22, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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. 4443.

Sincerely,



Lindsay Fabra  
Project Manager

Purchase Order: 4500665993  
Enclosures



# Groundwater Well Liquid Sampling & Packing List & Chain of Custody Form

Westinghouse Proprietary Class 2

FORM NO.:	ROF-06-007-1
REVISION:	8
PAGE:	1 OF 1
EFFECTIVE DATE:	06-10-13

VENDOR: General Engineering Laboratories (GEL)

Month: July

Year: 2015

From: Westinghouse Electric Company  
5801 Bluff Rd  
Hopkins, S.C.29061

377746

NOTE: Filter each sample prior to radiological analysis. ~~Acidify the sample following filtration.~~ If G.A. >15 pCi/l perform Isotopic Uranium. If G.B. >50 pCi/l perform Beta/Gamma Isotope scan. 217F 07/22/15

SAMPLE	NO.	Date Sampled	MLS	Gross Alpha	Gross Beta	Gamma	Tritium	Tc-99	Initial
WELL	#RW2	7/10/15 09:32	250				X		REC
WELL	#3A	7/16/15 10:35	250				X		REC
WELL	#7	7/13/15 11:32	250				X		REC
WELL	#10	7/13/15 14:05	250				X		REC
WELL	#13R	7/13/15 11:05	250				X		REC
WELL	#14	7/10/15 14:22	250				X		REC
WELL	#15	7/10/15 12:12	250				X		REC
WELL	#16	7/10/15 14:40	250				X		REC
WELL	#17	7/15/15 09:35	250				X		REC
WELL	#18	7/13/15 10:10	250				X		REC
WELL	#20	7/16/15 09:34	250				X		REC
WELL	#22	7/13/15 09:51	250				X		REC
WELL	#23R	7/10/15 13:51	250				X		REC
WELL	#24	7/10/15 11:18	250				X		REC
WELL	#26	7/10/15 10:10	250				X		REC
WELL	#27	7/16/15 09:55	250				X		REC
WELL	#28	7/13/15 10:38	250				X		REC
WELL	#29	7/13/15 09:09	250				X		REC
WELL	#30	7/13/15 09:30	250				X		REC
WELL	#32	7/13/15 14:25	250				X		REC
WELL	#33	7/10/15 08:46	250				X		REC
WELL	#38	7/13/15 08:45	250				X		REC
WELL	#39	7/15/15 10:09	250				X		REC
WELL	#41R	7/10/15 09:53	250				X		REC
WELL	#43	7/15/15 10:31	250				X		REC

Please email [crewsre@westinghouse.com](mailto:crewsre@westinghouse.com) when shipment is received

Technician: Randy Crews

Date Shipped: 7/22/15

Printed Copies are Uncontrolled

Electronically approved records are authenticated in the electronic document management system

This document is the property of and contains Proprietary Information owned by Westinghouse Electric Company LLC and/or its subcontractors and suppliers. It is transmitted to you in confidence and trust, and you agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you.







## SAMPLE RECEIPT &amp; REVIEW FORM

Client: <b>WNUC</b>		SDG/AR/COC/Work Order: <b>377746</b>	
Received By: <b>ZW</b>		Date Received: <b>7/22/15</b>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <b>0cpm</b>	
Classified Radioactive II or III by RSO?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: Ice bags <b>Blue ice</b> Dry ice <input checked="" type="checkbox"/> None Other (describe) *all temperatures are recorded in Celsius <b>23°C</b>
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <b>1304629666</b>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
8 Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services <b>Courier</b> Other  <b>GEL</b>

Comments (Use Continuation Form if needed):

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC001 Westinghouse Electric Co. LLC

Client SDG: 377746 GEL Work Order: 377746

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, 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, Lindsay Fabra.

Reviewed by

*Lindsay Fabra*

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL RW-2  
Sample ID: 377746001  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:32  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-110	+/-290	531	700	pCi/L		GXR1	08/03/15	2310	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 3A  
Sample ID: 377746002  
Matrix: Ground Water  
Collect Date: 16-JUL-15 10:35  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-236	+/-283	535	700	pCi/L		GXR1	08/03/15	2332	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 7	Project:	WNUC00129
Sample ID:	377746003	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 11:32		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-205	+/-283	531	700	pCi/L		GXR1	08/03/15	2353	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 10	Project:	WNUC00129
Sample ID:	377746004	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:05		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-269	+/-282	536	700	pCi/L		GXR1	08/04/15	0015	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 13R  
Sample ID: 377746005  
Matrix: Ground Water  
Collect Date: 13-JUL-15 11:05  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-15	+/-296	530	700	pCi/L		GXR1	08/04/15	0036	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 14	Project:	WNUC00129
Sample ID:	377746006	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:22		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-75.9	+/-296	539	700	pCi/L		GXR1	08/04/15	0058	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 15	Project:	WNUC00129
Sample ID:	377746007	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 12:12		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-140	+/-293	540	700	pCi/L		GXR1	08/04/15	0119	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 16	Project:	WNUC00129
Sample ID:	377746008	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 14:40		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-226	+/-283	534	700	pCi/L		GXR1	08/04/15	0140	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 17	Project:	WNUC00129
Sample ID:	377746009	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 09:35		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-44.3	+/-297	536	700	pCi/L		GXR1	08/04/15	0202	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 18	Project:	WNUC00129
Sample ID:	377746010	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-1.83	+/-300	536	700	pCi/L		GXR1	08/04/15	0223	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 20	Project:	WNUC00129
Sample ID:	377746011	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:34		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	19.7	+/-302	536	700	pCi/L		GXR1	08/04/15	0245	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 22	Project:	WNUC00129
Sample ID:	377746012	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:51		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-236	+/-281	531	700	pCi/L		GXR1	08/04/15	1637	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 23R  
Sample ID: 377746013  
Matrix: Ground Water  
Collect Date: 10-JUL-15 13:51  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-205	+/-287	538	700	pCi/L		GXR1	08/04/15	1658	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 24	Project:	WNUC00129
Sample ID:	377746014	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:18		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-300	+/-278	534	700	pCi/L		GXR1	08/04/15	1720	1496499	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 26	Project:	WNUC00129
Sample ID:	377746015	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:10		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-108	+/-291	540	700	pCi/L		GXR1	08/03/15	1813	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 27	Project:	WNUC00129
Sample ID:	377746016	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:55		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	20.2	+/-296	530	700	pCi/L		GXR1	08/03/15	1835	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 28	Project:	WNUC00129
Sample ID:	377746017	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 10:38		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	129	+/-314	547	700	pCi/L		GXR1	08/03/15	1856	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 29	Project:	WNUC00129
Sample ID:	377746018	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-33.2	+/-299	543	700	pCi/L		GXR1	08/03/15	1917	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 30	Project:	WNUC00129
Sample ID:	377746019	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 09:30		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-24.4	+/-296	536	700	pCi/L		GXR1	08/03/15	1939	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 32	Project:	WNUC00129
Sample ID:	377746020	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 14:25		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-46.7	+/-296	540	700	pCi/L		GXR1	08/03/15	2000	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 33	Project:	WNUC00129
Sample ID:	377746021	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 08:46		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	38.6	+/-303	540	700	pCi/L		GXR1	08/03/15	2021	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 38	Project:	WNUC00129
Sample ID:	377746022	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	13-JUL-15 08:45		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	140	+/-305	530	700	pCi/L		GXR1	08/03/15	2043	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 39	Project:	WNUC00129
Sample ID:	377746023	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:09		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-144	+/-289	540	700	pCi/L		GXR1	08/03/15	2104	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID: WELL 41R  
Sample ID: 377746024  
Matrix: Ground Water  
Collect Date: 10-JUL-15 09:53  
Receive Date: 22-JUL-15  
Collector: Client

Project: WNUC00129  
Client ID: WNUC001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-119	+/-292	542	700	pCi/L		GXR1	08/03/15	2125	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 43	Project:	WNUC00129
Sample ID:	377746025	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	15-JUL-15 10:31		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-96.3	+/-291	538	700	pCi/L		GXR1	08/03/15	2147	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 44	Project:	WNUC00129
Sample ID:	377746026	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 11:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	-230	+/-279	536	700	pCi/L		GXR1	08/03/15	2208	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 47	Project:	WNUC00129
Sample ID:	377746027	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	16-JUL-15 09:00		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	135	+/-310	539	700	pCi/L		GXR1	08/03/15	2230	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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## Certificate of Analysis

Report Date: August 6, 2015

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: Ground Water Well Liquid Analysis

Client Sample ID:	WELL 48	Project:	WNUC00129
Sample ID:	377746028	Client ID:	WNUC001
Matrix:	Ground Water		
Collect Date:	10-JUL-15 10:50		
Receive Date:	22-JUL-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Liquid "As Received"												
Tritium	U	96.5	+/-305	536	700	pCi/L		GXR1	08/03/15	2251	1496501	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## QC Summary

Report Date: August 6, 2015

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Westinghouse Electric Company, LLC

PO Drawer R

Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 377746

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1496499										
QC1203364256	377746001	DUP									
Tritium	U	-110	U	-11.1	pCi/L	N/A			N/A GXR1	08/04/15	18:03
	Uncertainty	+/-290		+/-289							
QC1203364258	LCS										
Tritium	1820			1610	pCi/L		88.8	(75%-125%)		08/04/15	18:46
	Uncertainty			+/-393							
QC1203364255	MB										
Tritium			U	-151	pCi/L					08/04/15	17:41
	Uncertainty			+/-288							
QC1203364257	377746001	MS									
Tritium	1820 U	-110		1510	pCi/L		83.1	(75%-125%)		08/04/15	18:24
	Uncertainty	+/-290		+/-396							
Batch	1496501										
QC1203364260	377746015	DUP									
Tritium	U	-108	U	-1.36	pCi/L	N/A			N/A GXR1	08/03/15	23:34
	Uncertainty	+/-291		+/-297							
QC1203364262	LCS										
Tritium	1820			1670	pCi/L		91.7	(75%-125%)		08/04/15	00:16
	Uncertainty			+/-412							
QC1203364259	MB										
Tritium			U	-155	pCi/L					08/03/15	23:12
	Uncertainty			+/-289							
QC1203364261	377746015	MS									
Tritium	1820 U	-108		1930	pCi/L		106	(75%-125%)		08/03/15	23:55
	Uncertainty	+/-291		+/-423							

### 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 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



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 377746

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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, 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.

**There are no "Data Exception Reports" associated with this analytical report.**

**List of current GEL Certifications as of 06 August 2015**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

**Enclosure g)**

**Westinghouse Electric Company Lab Reports  
pH, Ammonia, Fluoride, and Conductivity Results**

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2014115778	pH	7.16		10/10/14 20:51	Rugh
Well #10	2014115779	pH	5.60		10/10/14 20:51	Rugh
Well #13	2014115780	pH	6.51		10/10/14 20:52	Rugh
Well #13duplicate	2014115781	pH	6.50		10/10/14 20:52	Rugh
Well #18	2014115782	pH	7.58		10/10/14 20:52	Rugh
Well #22	2014115783	pH	5.26		10/10/14 20:53	Rugh
Well #28	2014115784	pH	5.98		10/10/14 20:53	Rugh
Well #29	2014115785	pH	7.02		10/10/14 20:53	Rugh
Well #30	2014115786	pH	6.66		10/10/14 20:54	Rugh
Well #32	2014115787	pH	7.00		10/10/14 20:54	Rugh
Well #38	2014115788	pH	5.30		10/10/14 20:54	Rugh
Well #38duplicate	2014115789	pH	5.26		10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2014115778	Cond	1927.0	umho/cm	10/10/14 20:51	Rugh
Well #10	2014115779	Cond	912.0	umho/cm	10/10/14 20:51	Rugh
Well #13	2014115780	Cond	814.0	umho/cm	10/10/14 20:52	Rugh
Well #13duplicate	2014115781	Cond	789.0	umho/cm	10/10/14 20:52	Rugh
Well #18	2014115782	Cond	5380.0	umho/cm	10/10/14 20:53	Rugh
Well #22	2014115783	Cond	2720.0	umho/cm	10/10/14 20:53	Rugh
Well #28	2014115784	Cond	2830.0	umho/cm	10/10/14 20:53	Rugh
Well #29	2014115785	Cond	837.0	umho/cm	10/10/14 20:54	Rugh
Well #30	2014115786	Cond	763.0	umho/cm	10/10/14 20:54	Rugh
Well #32	2014115787	Cond	1465.0	umho/cm	10/10/14 20:54	Rugh
Well #38	2014115788	Cond	293.0	umho/cm	10/10/14 20:54	Rugh
Well #38duplicate	2014115789	Cond	295.0	umho/cm	10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115778</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2014115778	F	7.50	ppm	10/10/14 20:51	Rugh
Well #10	2014115779	F	3.31	ppm	10/10/14 20:51	Rugh
Well #13	2014115780	F	10.3	ppm	10/10/14 20:52	Rugh
Well #13duplicate	2014115781	F	9.70	ppm	10/10/14 20:52	Rugh
Well #18	2014115782	F	7.40	ppm	10/10/14 20:53	Rugh
Well #22	2014115783	F	9.80	ppm	10/10/14 20:53	Rugh
Well #28	2014115784	F	5.70	ppm	10/10/14 20:53	Rugh
Well #29	2014115785	F	6.05	ppm	10/10/14 20:53	Rugh
Well #30	2014115786	F	11.5	ppm	10/10/14 20:54	Rugh
Well #32	2014115787	F	5.10	ppm	10/10/14 20:54	Rugh
Well #38	2014115788	F	<0.500	ppm	10/10/14 20:54	Rugh
Well #38duplicate	2014115789	F	<0.500	ppm	10/10/14 20:55	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/13/14 13:35

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115790</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2014115790	NH3-N	57.0	ppm	10/09/14 20:52	Rugh
Well #10	2014115791	NH3-N	5.03	ppm	10/09/14 20:52	Rugh
Well #13	2014115792	NH3-N	48.7	ppm	10/09/14 20:52	Rugh
Well #13duplicate	2014115793	NH3-N	46.2	ppm	10/09/14 20:53	Rugh
Well #18	2014115794	NH3-N	141	ppm	10/09/14 20:53	Rugh
Well #22	2014115795	NH3-N	72.9	ppm	10/09/14 20:53	Rugh
Well #28	2014115796	NH3-N	1.53	ppm	10/09/14 20:54	Rugh
Well #29	2014115797	NH3-N	15.3	ppm	10/09/14 20:54	Rugh
Well #30	2014115798	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh
Well #32	2014115799	NH3-N	58.6	ppm	10/09/14 20:54	Rugh
Well #38	2014115800	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh
Well #38duplicate	2014115801	NH3-N	<1.00	ppm	10/09/14 20:54	Rugh

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:41



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2014115802	pH	5.02		10/10/14 07:25	Kelly
Well #14	2014115803	pH	6.53		10/10/14 07:25	Kelly
Well #15	2014115804	pH	6.37		10/10/14 07:26	Kelly
Well #16	2014115805	pH	6.22		10/10/14 07:27	Kelly
Well #20	2014115806	pH	5.83		10/10/14 07:27	Kelly
Well #23R	2014115807	pH	5.35		10/10/14 07:28	Kelly
Well #24	2014115808	pH	5.48		10/10/14 07:28	Kelly
Well #26	2014115809	pH	5.76		10/10/14 07:29	Kelly
Well #27	2014115810	pH	6.57		10/10/14 07:30	Kelly
Well #33	2014115811	pH	5.62		10/10/14 07:30	Kelly
Well #39	2014115812	pH	5.35		10/10/14 07:31	Kelly
Well #41	2014115813	pH	5.61		10/10/14 07:31	Kelly
Well #43	2014115814	pH	5.41		10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	pH	5.31		10/10/14 07:33	Kelly
Well #47	2014115816	pH	6.22		10/10/14 07:33	Kelly
Well #48	2014115817	pH	5.66		10/10/14 07:34	Kelly
Well #RW2	2014115818	pH	4.43		10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	pH	5.06		10/10/14 07:35	Kelly
Well #17	2014115820	pH	6.18		10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2014115802	Cond	26.5	umho/cm	10/10/14 07:25	Kelly
Well #14	2014115803	Cond	454.0	umho/cm	10/10/14 07:26	Kelly
Well #15	2014115804	Cond	432.0	umho/cm	10/10/14 07:26	Kelly
Well #16	2014115805	Cond	336.0	umho/cm	10/10/14 07:27	Kelly
Well #20	2014115806	Cond	105.1	umho/cm	10/10/14 07:27	Kelly
Well #23R	2014115807	Cond	63.8	umho/cm	10/10/14 07:28	Kelly
Well #24	2014115808	Cond	61.3	umho/cm	10/10/14 07:29	Kelly
Well #26	2014115809	Cond	195.7	umho/cm	10/10/14 07:30	Kelly
Well #27	2014115810	Cond	381.0	umho/cm	10/10/14 07:30	Kelly
Well #33	2014115811	Cond	165.9	umho/cm	10/10/14 07:31	Kelly
Well #39	2014115812	Cond	1188.0	umho/cm	10/10/14 07:31	Kelly
Well #41	2014115813	Cond	592.0	umho/cm	10/10/14 07:32	Kelly
Well #43	2014115814	Cond	109.1	umho/cm	10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	Cond	101.3	umho/cm	10/10/14 07:33	Kelly
Well #47	2014115816	Cond	535.0	umho/cm	10/10/14 07:33	Kelly
Well #48	2014115817	Cond	128.6	umho/cm	10/10/14 07:34	Kelly
Well #RW2	2014115818	Cond	345.0	umho/cm	10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	Cond	26.5	umho/cm	10/10/14 07:35	Kelly
Well #17	2014115820	Cond	317.0	umho/cm	10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2014115802	F	<0.500	ppm	10/10/14 07:25	Kelly
Well #14	2014115803	F	<0.500	ppm	10/10/14 07:25	Kelly
Well #15	2014115804	F	2.17	ppm	10/10/14 07:26	Kelly
Well #16	2014115805	F	8.60	ppm	10/10/14 07:27	Kelly
Well #20	2014115806	F	<0.500	ppm	10/10/14 07:27	Kelly
Well #23R	2014115807	F	<0.500	ppm	10/10/14 07:28	Kelly
Well #24	2014115808	F	<0.500	ppm	10/10/14 07:29	Kelly
Well #26	2014115809	F	1.77	ppm	10/10/14 07:29	Kelly
Well #27	2014115810	F	6.55	ppm	10/10/14 07:30	Kelly
Well #33	2014115811	F	<0.500	ppm	10/10/14 07:30	Kelly
Well #39	2014115812	F	<0.500	ppm	10/10/14 07:31	Kelly
Well #41	2014115813	F	<0.500	ppm	10/10/14 07:31	Kelly
Well #43	2014115814	F	<0.500	ppm	10/10/14 07:32	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115802</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115815	F	<0.500	ppm	10/10/14 07:33	Kelly
Well #47	2014115816	F	5.25	ppm	10/10/14 07:33	Kelly
Well #48	2014115817	F	<0.500	ppm	10/10/14 07:34	Kelly
Well #RW2	2014115818	F	<0.500	ppm	10/10/14 07:35	Kelly
Well #3Aduplicate	2014115819	F	<0.500	ppm	10/10/14 07:35	Kelly
Well #17	2014115820	F	1.74	ppm	10/10/14 07:36	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2014115821	NH3-N	<1.00	ppm	10/09/14 20:55	Rugh
Well #14	2014115822	NH3-N	3.04	ppm	10/09/14 20:55	Rugh
Well #15	2014115823	NH3-N	13.1	ppm	10/09/14 20:55	Rugh
Well #16	2014115824	NH3-N	17.3	ppm	10/09/14 20:55	Rugh
Well #20	2014115825	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #23R	2014115826	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #24	2014115827	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #26	2014115828	NH3-N	<1.00	ppm	10/09/14 20:56	Rugh
Well #27	2014115829	NH3-N	8.73	ppm	10/09/14 20:56	Rugh
Well #33	2014115830	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #39	2014115831	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #41	2014115832	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #43	2014115833	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2014115821</b>
Sample Type <b>Well Samples</b>			Sample Date <b>10-09-2014</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2014115834	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #47	2014115835	NH3-N	18.6	ppm	10/09/14 20:57	Rugh
Well #48	2014115836	NH3-N	<1.00	ppm	10/09/14 20:57	Rugh
Well #RW2	2014115837	NH3-N	<1.00	ppm	10/09/14 20:58	Rugh
Well #3Aduplicate	2014115838	NH3-N	<1.00	ppm	10/09/14 20:58	Rugh
Well #17	2014115839	NH3-N	4.87	ppm	10/09/14 20:58	Rugh

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
10/10/14 18:42

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015009219	pH	6.99		01/25/15 17:24	Rugh
Well #10	2015009220	pH	5.24		01/25/15 17:25	Rugh
Well #13	2015009221	pH	6.52		01/25/15 17:26	Rugh
Well #18	2015009222	pH	7.32		01/25/15 17:26	Rugh
Well #22	2015009223	pH	4.90		01/25/15 17:27	Rugh
Well #28	2015009224	pH	6.03		01/25/15 17:28	Rugh
Well #29	2015009225	pH	7.14		01/25/15 17:28	Rugh
Well #30	2015009226	pH	6.53		01/25/15 17:29	Rugh
Well #32	2015009227	pH	7.08		01/25/15 17:29	Rugh
Well #38	2015009228	pH	5.34		01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015009219	Cond	2400.0	umho/cm	01/25/15 17:24	Rugh
Well #10	2015009220	Cond	822.0	umho/cm	01/25/15 17:25	Rugh
Well #13	2015009221	Cond	823.0	umho/cm	01/25/15 17:26	Rugh
Well #18	2015009222	Cond	5520.0	umho/cm	01/25/15 17:26	Rugh
Well #22	2015009223	Cond	907.0	umho/cm	01/25/15 17:27	Rugh
Well #28	2015009224	Cond	2270.0	umho/cm	01/25/15 17:28	Rugh
Well #29	2015009225	Cond	880.0	umho/cm	01/25/15 17:28	Rugh
Well #30	2015009226	Cond	928.0	umho/cm	01/25/15 17:29	Rugh
Well #32	2015009227	Cond	1504.0	umho/cm	01/25/15 17:29	Rugh
Well #38	2015009228	Cond	284.0	umho/cm	01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015009219	F	7.70	ppm	01/25/15 17:24	Rugh
Well #10	2015009220	F	3.65	ppm	01/25/15 17:25	Rugh
Well #13	2015009221	F	10.9	ppm	01/25/15 17:26	Rugh
Well #18	2015009222	F	6.55	ppm	01/25/15 17:26	Rugh
Well #22	2015009223	F	5.50	ppm	01/25/15 17:27	Rugh
Well #28	2015009224	F	5.35	ppm	01/25/15 17:28	Rugh
Well #29	2015009225	F	5.75	ppm	01/25/15 17:28	Rugh
Well #30	2015009226	F	11.3	ppm	01/25/15 17:29	Rugh
Well #32	2015009227	F	4.55	ppm	01/25/15 17:29	Rugh
Well #38	2015009228	F	<0.500	ppm	01/25/15 22:26	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009219</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #7	2015009219	Cond_Dup RPD	2400.0 0.0	umho/cm %	01/25/15 17:24	Rugh
Well #28	2015009224	Cond_Dup RPD	2270.0 0.0	umho/cm %	01/25/15 17:28	Rugh
Well #29	2015009225	Cond_Dup RPD	881.0 0.1	umho/cm %	01/25/15 17:28	Rugh
Well #32	2015009227	Cond_Dup RPD	1506.0 0.1	umho/cm %	01/25/15 17:29	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 -14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009230</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015009230	NH3-N	54.4	ppm	01/25/15 17:48	Rugh
Well #10	2015009231	NH3-N	2.40	ppm	01/25/15 17:49	Rugh
Well #13	2015009232	NH3-N	44.0	ppm	01/25/15 17:49	Rugh
Well #18	2015009233	NH3-N	107	ppm	01/25/15 17:49	Rugh
Well #22	2015009234	NH3-N	26.1	ppm	01/25/15 17:49	Rugh
Well #28	2015009235	NH3-N	1.76	ppm	01/25/15 17:50	Rugh
Well #29	2015009236	NH3-N	16.0	ppm	01/25/15 17:50	Rugh
Well #30	2015009237	NH3-N	1.32	ppm	01/25/15 17:50	Rugh
Well #32	2015009238	NH3-N	54.4	ppm	01/25/15 17:50	Rugh
Well #38	2015009239	NH3-N	<1.00	ppm	01/25/15 17:51	Rugh

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015009241	pH	5.07		01/25/15 22:27	Rugh
Well #14	2015009242	pH	6.16		01/25/15 22:27	Rugh
Well #15	2015009243	pH	6.34		01/25/15 22:27	Rugh
Well #16	2015009244	pH	6.22		01/25/15 22:28	Rugh
Well #20	2015009245	pH	5.67		01/25/15 22:29	Rugh
Well #23	2015009246	pH	5.42		01/25/15 22:32	Rugh
Well #24	2015009247	pH	5.61		01/25/15 22:33	Rugh
Well #26	2015009248	pH	6.10		01/25/15 22:33	Rugh
Well #27	2015009249	pH	6.50		01/25/15 22:34	Rugh
Well #33	2015009250	pH	5.66		01/25/15 22:34	Rugh
Well #39	2015009251	pH	5.41		01/25/15 22:34	Rugh
Well #41	2015009252	pH	5.99		01/25/15 22:35	Rugh
Well #43	2015009253	pH	5.58		01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	pH	5.35		01/25/15 22:36	Rugh
Well #47	2015009255	pH	6.10		01/25/15 22:36	Rugh
Well #48	2015009256	pH	5.98		01/25/15 22:36	Rugh
Well #RW2	2015009257	pH	4.56		01/25/15 22:37	Rugh
Well #17	2015009258	pH	6.30		01/25/15 22:37	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2015009241	Cond	26.0	umho/cm	01/25/15 22:27	Rugh
Well #14	2015009242	Cond	103.8	umho/cm	01/25/15 22:27	Rugh
Well #15	2015009243	Cond	421.0	umho/cm	01/25/15 22:28	Rugh
Well #16	2015009244	Cond	319.0	umho/cm	01/25/15 22:28	Rugh
Well #20	2015009245	Cond	116.7	umho/cm	01/25/15 22:29	Rugh
Well #23	2015009246	Cond	62.7	umho/cm	01/25/15 22:33	Rugh
Well #24	2015009247	Cond	61.0	umho/cm	01/25/15 22:33	Rugh
Well #26	2015009248	Cond	195.7	umho/cm	01/25/15 22:33	Rugh
Well #27	2015009249	Cond	354.0	umho/cm	01/25/15 22:34	Rugh
Well #33	2015009250	Cond	154.4	umho/cm	01/25/15 22:34	Rugh
Well #39	2015009251	Cond	1129.0	umho/cm	01/25/15 22:35	Rugh
Well #41	2015009252	Cond	530.0	umho/cm	01/25/15 22:35	Rugh
Well #43	2015009253	Cond	109.1	umho/cm	01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	Cond	109.7	umho/cm	01/25/15 22:36	Rugh
Well #47	2015009255	Cond	537.0	umho/cm	01/25/15 22:36	Rugh
Well #48	2015009256	Cond	111.7	umho/cm	01/25/15 22:37	Rugh
Well #RW2	2015009257	Cond	318.0	umho/cm	01/25/15 22:37	Rugh
Well #17	2015009258	Cond	319.0	umho/cm	01/25/15 22:38	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015009241	F	<0.500	ppm	01/25/15 22:27	Rugh
Well #14	2015009242	F	<0.500	ppm	01/25/15 22:27	Rugh
Well #15	2015009243	F	2.22	ppm	01/25/15 22:27	Rugh
Well #16	2015009244	F	7.50	ppm	01/25/15 22:28	Rugh
Well #20	2015009245	F	<0.500	ppm	01/25/15 22:29	Rugh
Well #23	2015009246	F	<0.500	ppm	01/25/15 22:32	Rugh
Well #24	2015009247	F	<0.500	ppm	01/25/15 22:33	Rugh
Well #26	2015009248	F	1.83	ppm	01/25/15 22:33	Rugh
Well #27	2015009249	F	7.20	ppm	01/25/15 22:34	Rugh
Well #33	2015009250	F	<0.500	ppm	01/25/15 22:34	Rugh
Well #39	2015009251	F	<0.500	ppm	01/25/15 22:34	Rugh
Well #41	2015009252	F	<0.500	ppm	01/25/15 22:35	Rugh
Well #43	2015009253	F	<0.500	ppm	01/25/15 22:35	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009241</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009254	F	<0.500	ppm	01/25/15 22:36	Rugh
Well #47	2015009255	F	4.92	ppm	01/25/15 22:36	Rugh
Well #48	2015009256	F	<0.500	ppm	01/25/15 22:37	Rugh
Well #RW2	2015009257	F	<0.500	ppm	01/25/15 22:37	Rugh
Well #17	2015009258	F	2.02	ppm	01/25/15 22:38	Rugh

### Cond\_Dup

Well #16	2015009244	Cond_Dup RPD	320.0 0.3	umho/cm %	01/25/15 22:28 01/25/15 22:28	Rugh
Well #39	2015009251	Cond_Dup RPD	1128.0 0.1	umho/cm %	01/25/15 22:35	Rugh
Well #47	2015009255	Cond_Dup RPD	536.0 0.2	umho/cm %	01/25/15 22:36	Rugh
Well #17	2015009258	Cond_Dup RPD	320.0 0.3	umho/cm %	01/25/15 22:38	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015009259	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #14	2015009260	NH3-N	<1.00	ppm	01/22/15 22:51	Swafford
Well #15	2015009261	NH3-N	10.1	ppm	01/22/15 22:51	Swafford
Well #16	2015009262	NH3-N	12.6	ppm	01/22/15 22:52	Swafford
Well #20	2015009263	NH3-N	<1.00	ppm	01/22/15 22:48	Swafford
Well #23	2015009264	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #24	2015009265	NH3-N	<1.00	ppm	01/22/15 22:53	Swafford
Well #26	2015009266	NH3-N	<1.00	ppm	01/25/15 17:54	Rugh
Well #27	2015009267	NH3-N	6.41	ppm	01/22/15 22:53	Swafford
Well #33	2015009268	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #39	2015009269	NH3-N	<1.00	ppm	01/22/15 22:48	Swafford
Well #41	2015009270	NH3-N	<1.00	ppm	01/22/15 22:51	Swafford
Well #43	2015009271	NH3-N	<1.00	ppm	01/22/15 22:52	Swafford

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015009259</b>
Sample Type <b>Well Samples</b>			Sample Date <b>01-22-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015009272	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #47	2015009273	NH3-N	18.3	ppm	01/25/15 17:55	Rugh
Well #48	2015009274	NH3-N	<1.00	ppm	01/25/15 17:55	Rugh
Well #RW2	2015009275	NH3-N	<1.00	ppm	01/25/15 17:56	Rugh
Well #17	2015009276	NH3-N	5.89	ppm	01/25/15 17:56	Rugh

*NH3-N Sample Preservative:*

*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:45 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
01/26/15 10:41

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043880</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #RW2	2015043880	pH	4.60		04/11/15 07:02	Kelly
Well #41R	2015043881	pH	5.90		04/11/15 07:03	Kelly
Well #26	2015043882	pH	5.69		04/11/15 07:04	Kelly
Well #48	2015043883	pH	5.77		04/11/15 07:05	Kelly

### Specific Conductance at 25C

Well #RW2	2015043880	Cond	256.0	umho/cm	04/11/15 07:02	Kelly
Well #41R	2015043881	Cond	530.0	umho/cm	04/11/15 07:03	Kelly
Well #26	2015043882	Cond	176.2	umho/cm	04/11/15 07:04	Kelly
Well #48	2015043883	Cond	111.7	umho/cm	04/11/15 07:05	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:02

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043880</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #RW2	2015043880	F	<0.500	ppm	04/11/15 07:02	Kelly
Well #41R	2015043881	F	<0.500	ppm	04/11/15 07:03	Kelly
Well #26	2015043882	F	1.60	ppm	04/11/15 07:04	Kelly
Well #48	2015043883	F	<0.500	ppm	04/11/15 07:05	Kelly

### Cond\_Dup

Well #RW2	2015043880	Cond_Dup RPD	255.0 0.4	umho/cm %	04/11/15 07:02	Kelly
Well #41R	2015043881	Cond_Dup RPD	531.0 0.2	umho/cm %	04/11/15 07:03 04/11/15 07:03	Kelly
Well #26	2015043882	Cond_Dup RPD	177.0 0.5	umho/cm %	04/11/15 07:04	Kelly
Well #48	2015043883	Cond_Dup RPD	111.6 0.1	umho/cm %	04/11/15 07:05	Kelly

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:02

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015043891</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-09-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #RW2	2015043891	NH3-N	<1.00	ppm	04/11/15 07:38	Kelly
Well #41R	2015043892	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly
Well #26	2015043893	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly
Well #48	2015043894	NH3-N	<1.00	ppm	04/11/15 07:39	Kelly

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:45 - 11:00  
Sampler: R. Crews  
Released to:

### Laboratory Approval

Horace Whitaker  
04/13/15 12:03

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015045791	pH	6.84		04/18/15 12:56	Rugh
Well #10	2015045792	pH	5.55		04/18/15 12:57	Rugh
Well #13R	2015045793	pH	6.45		04/18/15 12:58	Rugh
Well #18	2015045794	pH	7.09		04/18/15 12:59	Rugh
Well #22	2015045795	pH	4.61		04/18/15 13:01	Rugh
Well #28	2015045796	pH	5.99		04/18/15 13:03	Rugh
Well #29	2015045797	pH	7.06		04/18/15 13:03	Rugh
Well #30	2015045798	pH	6.66		04/18/15 13:04	Rugh
Well #32	2015045799	pH	6.70		04/18/15 13:04	Rugh
Well #38	2015045800	pH	5.19		04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015045791	Cond	2730.0	umho/cm	04/18/15 12:56	Rugh
Well #10	2015045792	Cond	825.0	umho/cm	04/18/15 12:57	Rugh
Well #13R	2015045793	Cond	845.0	umho/cm	04/18/15 12:58	Rugh
Well #18	2015045794	Cond	5880.0	umho/cm	04/18/15 12:59	Rugh
Well #22	2015045795	Cond	992.0	umho/cm	04/18/15 13:01	Rugh
Well #28	2015045796	Cond	1998.0	umho/cm	04/18/15 13:03	Rugh
Well #29	2015045797	Cond	821.0	umho/cm	04/18/15 13:03	Rugh
Well #30	2015045798	Cond	685.0	umho/cm	04/18/15 13:04	Rugh
Well #32	2015045799	Cond	1606.0	umho/cm	04/18/15 13:04	Rugh
Well #38	2015045800	Cond	262.0	umho/cm	04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015045791	F	6.55	ppm	04/18/15 12:56	Rugh
Well #10	2015045792	F	2.68	ppm	04/18/15 12:57	Rugh
Well #13R	2015045793	F	10.7	ppm	04/18/15 12:58	Rugh
Well #18	2015045794	F	6.20	ppm	04/18/15 12:59	Rugh
Well #22	2015045795	F	6.25	ppm	04/18/15 13:01	Rugh
Well #28	2015045796	F	6.15	ppm	04/18/15 13:03	Rugh
Well #29	2015045797	F	6.30	ppm	04/18/15 13:03	Rugh
Well #30	2015045798	F	10.8	ppm	04/18/15 13:04	Rugh
Well #32	2015045799	F	5.00	ppm	04/18/15 13:04	Rugh
Well #38	2015045800	F	<0.500	ppm	04/18/15 13:05	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045791</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #7	2015045791	Cond_Dup	2730.0	umho/cm	04/18/15 12:56	Rugh
		RPD	0.0	%		
Well #10	2015045792	Cond_Dup	825.0	umho/cm	04/18/15 12:57	Rugh
		RPD	0.0	%		
Well #18	2015045794	Cond_Dup	5880.0	umho/cm	04/18/15 12:59	Rugh
		RPD	0.0	%		
Well #29	2015045797	Cond_Dup	822.0	umho/cm	04/18/15 13:03	Rugh
		RPD	0.1	%		
Well #38	2015045800	Cond_Dup	260.0	umho/cm	04/18/15 13:05	Rugh
		RPD	0.8	%		

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
04/21/15 12:51



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015045803</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-13-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015045803	NH3-N	56.1	ppm	04/14/15 12:25	Harvey
Well #10	2015045804	NH3-N	4.40	ppm	04/14/15 12:26	Harvey
Well #13R	2015045805	NH3-N	47.8	ppm	04/14/15 12:27	Harvey
Well #18	2015045806	NH3-N	99.6	ppm	04/14/15 12:27	Harvey
Well #22	2015045807	NH3-N	21.9	ppm	04/14/15 12:28	Harvey
Well #28	2015045808	NH3-N	1.11	ppm	04/14/15 12:30	Harvey
Well #29	2015045809	NH3-N	17.9	ppm	04/14/15 12:34	Harvey
Well #30	2015045810	NH3-N	<1.00	ppm	04/14/15 12:35	Harvey
Well #32	2015045811	NH3-N	48.0	ppm	04/14/15 12:35	Harvey
Well #38	2015045812	NH3-N	<1.00	ppm	04/14/15 12:36	Harvey

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:50 - 12:05  
Sampler: R. Crews  
Released to: LHarvey

### Laboratory Approval

Horace Whitaker  
04/14/15 16:09

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #14	2015046277	pH	6.47		04/15/15 21:26	Penny
Well #15	2015046278	pH	6.33		04/15/15 21:27	Penny
Well #16	2015046279	pH	6.23		04/15/15 21:28	Penny
Well #17	2015046280	pH	6.29		04/15/15 21:31	Penny
Well #23R	2015046281	pH	5.51		04/15/15 21:31	Penny
Well #24	2015046282	pH	5.56		04/15/15 21:32	Penny
Well #33	2015046283	pH	5.66		04/15/15 21:32	Penny
Well #39	2015046284	pH	5.44		04/15/15 21:34	Penny
Well #43	2015046285	pH	5.44		04/15/15 21:36	Penny
Well #44	2015046286	pH	5.40		04/15/15 21:25	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/16/15 11:57

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #14	2015046277	Cond	260.0	umho/cm	04/15/15 21:26	Penny
Well #15	2015046278	Cond	432.0	umho/cm	04/15/15 21:27	Penny
Well #16	2015046279	Cond	325.0	umho/cm	04/15/15 21:29	Penny
Well #17	2015046280	Cond	311.0	umho/cm	04/15/15 21:31	Penny
Well #23R	2015046281	Cond	64.2	umho/cm	04/15/15 21:31	Penny
Well #24	2015046282	Cond	59.2	umho/cm	04/15/15 21:32	Penny
Well #33	2015046283	Cond	146.3	umho/cm	04/15/15 21:33	Penny
Well #39	2015046284	Cond	951.0	umho/cm	04/15/15 21:34	Penny
Well #43	2015046285	Cond	124.4	umho/cm	04/15/15 21:36	Penny
Well #44	2015046286	Cond	101.1	umho/cm	04/15/15 21:25	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/16/15 11:57

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046277</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #14	2015046277	F	<0.500	ppm	04/15/15 21:26	Penny
Well #15	2015046278	F	2.16	ppm	04/15/15 21:27	Penny
Well #16	2015046279	F	7.15	ppm	04/15/15 21:28	Penny
Well #17	2015046280	F	1.66	ppm	04/15/15 21:31	Penny
Well #23R	2015046281	F	<0.500	ppm	04/15/15 21:31	Penny
Well #24	2015046282	F	<0.500	ppm	04/15/15 21:32	Penny
Well #33	2015046283	F	<0.500	ppm	04/15/15 21:33	Penny
Well #39	2015046284	F	<0.500	ppm	04/15/15 21:34	Penny
Well #43	2015046285	F	<0.500	ppm	04/15/15 21:36	Penny
Well #44	2015046286	F	<0.500	ppm	04/15/15 21:25	Penny

### Cond\_Dup

Well #43	2015046285	Cond_Dup	123.4	umho/cm	04/16/15 17:12	Penny
		RPD	0.8	%	04/16/15 17:12	

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 -12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015046294</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-14-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #14	2015046294	NH3-N	<1.00	ppm	04/14/15 20:23	Penny
Well #15	2015046295	NH3-N	6.35	ppm	04/14/15 20:23	Penny
Well #16	2015046296	NH3-N	10.2	ppm	04/14/15 20:25	Penny
Well #17	2015046297	NH3-N	3.72	ppm	04/14/15 20:25	Penny
Well #23R	2015046298	NH3-N	<1.00	ppm	04/14/15 20:25	Penny
Well #24	2015046299	NH3-N	<1.00	ppm	04/14/15 20:25	Penny
Well #33	2015046300	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #39	2015046301	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #43	2015046302	NH3-N	<1.00	ppm	04/14/15 20:26	Penny
Well #44	2015046303	NH3-N	<1.00	ppm	04/14/15 20:27	Penny

*NH3-N Sample Preservative:*

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:24 - 12:00  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/15/15 12:40

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047334</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015047334	pH	5.07		04/17/15 20:15	Penny
Well #20	2015047335	pH	5.57		04/17/15 20:16	Penny
Well #27	2015047336	pH	6.46		04/17/15 20:17	Penny
Well #47	2015047337	pH	6.05		04/17/15 20:17	Penny

### Specific Conductance at 25C

Well #3A	2015047334	Cond	26.9	umho/cm	04/17/15 20:16	Penny
Well #20	2015047335	Cond	137.5	umho/cm	04/17/15 20:16	Penny
Well #27	2015047336	Cond	362.0	umho/cm	04/17/15 20:17	Penny
Well #47	2015047337	Cond	522.0	umho/cm	04/17/15 20:18	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 -11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047334</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015047334	F	<0.500	ppm	04/17/15 20:16	Penny
Well #20	2015047335	F	<0.500	ppm	04/17/15 20:16	Penny
Well #27	2015047336	F	7.15	ppm	04/17/15 20:17	Penny
Well #47	2015047337	F	5.20	ppm	04/17/15 20:17	Penny

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 -11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015047352</b>
Sample Type <b>Well Samples</b>			Sample Date <b>04-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015047352	NH3-N	<1.00	ppm	04/17/15 20:13	Penny
Well #20	2015047353	NH3-N	<1.00	ppm	04/17/15 20:14	Penny
Well #27	2015047354	NH3-N	7.59	ppm	04/17/15 20:15	Penny
Well #47	2015047355	NH3-N	15.0	ppm	04/17/15 20:15	Penny

NH3-N Sample Preservative: H2SO4 FSC Lot#108088

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 09:18 - 11:58  
Sampler: R. Crews  
Released to: A. Penny

### Laboratory Approval

Horace Whitaker  
04/21/15 17:14



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #7	2015085726	pH	7.09		07/20/15 22:47	Rugh
Well #10	2015085727	pH	5.92		07/20/15 22:48	Rugh
Well #13R	2015085728	pH	6.59		07/20/15 22:50	Rugh
Well #17	2015085729	pH	6.29		07/20/15 22:51	Rugh
Well #18	2015085730	pH	7.23		07/20/15 22:53	Rugh
Well #22	2015085731	pH	5.49		07/20/15 22:55	Rugh
Well #28	2015085732	pH	6.15		07/20/15 22:55	Rugh
Well #29	2015085733	pH	7.32		07/20/15 22:56	Rugh
Well #30	2015085734	pH	6.73		07/20/15 22:56	Rugh
Well #32	2015085735	pH	7.04		07/20/15 22:57	Rugh
Well #38	2015085736	pH	5.22		07/20/15 22:57	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #7	2015085726	Cond	2970.0	umho/cm	07/20/15 22:48	Rugh
Well #10	2015085727	Cond	968.0	umho/cm	07/20/15 22:49	Rugh
Well #13R	2015085728	Cond	837.0	umho/cm	07/20/15 22:50	Rugh
Well #17	2015085729	Cond	311.0	umho/cm	07/20/15 22:52	Rugh
Well #18	2015085730	Cond	5930.0	umho/cm	07/20/15 22:54	Rugh
Well #22	2015085731	Cond	1333.0	umho/cm	07/20/15 22:55	Rugh
Well #28	2015085732	Cond	1709.0	umho/cm	07/20/15 22:56	Rugh
Well #29	2015085733	Cond	844.0	umho/cm	07/20/15 22:56	Rugh
Well #30	2015085734	Cond	862.0	umho/cm	07/20/15 22:57	Rugh
Well #32	2015085735	Cond	1815.0	umho/cm	07/20/15 22:57	Rugh
Well #38	2015085736	Cond	248.0	umho/cm	07/20/15 22:58	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #7	2015085726	F	7.30	ppm	07/20/15 22:47	Rugh
Well #10	2015085727	F	2.96	ppm	07/20/15 22:48	Rugh
Well #13R	2015085728	F	10.7	ppm	07/20/15 22:50	Rugh
Well #17	2015085729	F	1.98	ppm	07/20/15 22:52	Rugh
Well #18	2015085730	F	6.40	ppm	07/20/15 22:54	Rugh
Well #22	2015085731	F	6.60	ppm	07/20/15 22:55	Rugh
Well #28	2015085732	F	6.00	ppm	07/20/15 22:56	Rugh
Well #29	2015085733	F	6.95	ppm	07/20/15 22:56	Rugh
Well #30	2015085734	F	9.65	ppm	07/20/15 22:56	Rugh
Well #32	2015085735	F	4.66	ppm	07/20/15 22:57	Rugh
Well #38	2015085736	F	<0.500	ppm	07/20/15 22:58	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085726</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Cond_Dup</b>						
Well #18	2015085730	Cond_Dup	5920.0	umho/cm	07/20/15 22:55	Rugh
		RPD	0.2	%		
Well #38	2015085736	Cond_Dup	249.0	umho/cm	07/20/15 22:58	Rugh
		RPD	0.4	%		

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:40  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085739</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #7	2015085739	NH3-N	57.1	ppm	07/19/15 11:55	Harvey
Well #10	2015085740	NH3-N	8.59	ppm	07/19/15 11:56	Harvey
Well #13	2015085741	NH3-N	49.1	ppm	07/19/15 11:56	Harvey
Well #17	2015085742	NH3-N	6.14	ppm	07/19/15 11:57	Harvey
Well #18	2015085743	NH3-N	126	ppm	07/19/15 11:58	Harvey
Well #22	2015085744	NH3-N	63.1	ppm	07/19/15 11:59	Harvey
Well #28	2015085745	NH3-N	1.10	ppm	07/19/15 12:00	Harvey
Well #29	2015085746	NH3-N	25.2	ppm	07/19/15 12:01	Harvey
Well #30	2015085747	NH3-N	1.29	ppm	07/19/15 12:02	Harvey
Well #32	2015085748	NH3-N	75.1	ppm	07/19/15 12:03	Harvey
Well #38	2015085749	NH3-N	<1.00	ppm	07/19/15 12:04	Harvey

NH3-N Sample Preservative: H2SO4 FSC Lot#108088

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: LHarvey

### Laboratory Approval

Horace Whitaker  
07/20/15 11:31

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Hydrogen Ion Activity (pH)</b>						
Well #3A	2015085750	pH	5.06		07/20/15 23:03	Rugh
Well #14	2015085751	pH	6.66		07/20/15 23:04	Rugh
Well #15	2015085752	pH	6.57		07/20/15 23:05	Rugh
Well #16	2015085753	pH	6.25		07/20/15 23:06	Rugh
Well #20	2015085754	pH	5.68		07/20/15 23:12	Rugh
Well #23	2015085755	pH	5.75		07/20/15 23:13	Rugh
Well #24	2015085756	pH	5.72		07/20/15 23:13	Rugh
Well #26	2015085757	pH	6.00		07/20/15 23:21	Rugh
Well #27	2015085758	pH	6.45		07/20/15 23:21	Rugh
Well #33	2015085759	pH	5.85		07/20/15 23:23	Rugh
Well #39	2015085760	pH	5.48		07/20/15 23:24	Rugh
Well #41	2015085761	pH	5.95		07/20/15 23:24	Rugh
Well #43	2015085762	pH	5.60		07/20/15 23:24	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	pH	5.65		07/20/15 23:25	Rugh
Well #47	2015085764	pH	6.10		07/20/15 23:26	Rugh
Well #48	2015085765	pH	5.87		07/20/15 23:26	Rugh
Well #RW2	2015085766	pH	4.69		07/20/15 23:02	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32



## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Specific Conductance at 25C</b>						
Well #3A	2015085750	Cond	26.1	umho/cm	07/20/15 23:03	Rugh
Well #14	2015085751	Cond	396.0	umho/cm	07/20/15 23:04	Rugh
Well #15	2015085752	Cond	437.0	umho/cm	07/20/15 23:05	Rugh
Well #16	2015085753	Cond	301.0	umho/cm	07/20/15 23:06	Rugh
Well #20	2015085754	Cond	127.4	umho/cm	07/20/15 23:12	Rugh
Well #23	2015085755	Cond	64.9	umho/cm	07/20/15 23:13	Rugh
Well #24	2015085756	Cond	58.5	umho/cm	07/20/15 23:13	Rugh
Well #26	2015085757	Cond	200.0	umho/cm	07/20/15 23:21	Rugh
Well #27	2015085758	Cond	349.0	umho/cm	07/20/15 23:22	Rugh
Well #33	2015085759	Cond	144.8	umho/cm	07/20/15 23:23	Rugh
Well #39	2015085760	Cond	779.0	umho/cm	07/20/15 23:24	Rugh
Well #41	2015085761	Cond	552.0	umho/cm	07/20/15 23:24	Rugh
Well #43	2015085762	Cond	114.2	umho/cm	07/20/15 23:25	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	Cond	96.2	umho/cm	07/20/15 23:25	Rugh
Well #47	2015085764	Cond	586.0	umho/cm	07/20/15 23:26	Rugh
Well #48	2015085765	Cond	119.6	umho/cm	07/20/15 23:27	Rugh
Well #RW2	2015085766	Cond	264.0	umho/cm	07/20/15 23:02	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Fluoride</b>						
Well #3A	2015085750	F	<0.500	ppm	07/20/15 23:03	Rugh
Well #14	2015085751	F	<0.500	ppm	07/20/15 23:04	Rugh
Well #15	2015085752	F	2.40	ppm	07/20/15 23:05	Rugh
Well #16	2015085753	F	9.55	ppm	07/20/15 23:06	Rugh
Well #20	2015085754	F	<0.500	ppm	07/20/15 23:12	Rugh
Well #23	2015085755	F	<0.500	ppm	07/20/15 23:13	Rugh
Well #24	2015085756	F	<0.500	ppm	07/20/15 23:13	Rugh
Well #26	2015085757	F	1.82	ppm	07/20/15 23:21	Rugh
Well #27	2015085758	F	7.05	ppm	07/20/15 23:21	Rugh
Well #33	2015085759	F	<0.500	ppm	07/20/15 23:23	Rugh
Well #39	2015085760	F	<0.500	ppm	07/20/15 23:24	Rugh
Well #41	2015085761	F	<0.500	ppm	07/20/15 23:24	Rugh
Well #43	2015085762	F	<0.500	ppm	07/20/15 23:25	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085750</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085763	F	<0.500	ppm	07/20/15 23:25	Rugh
Well #47	2015085764	F	5.35	ppm	07/20/15 23:26	Rugh
Well #48	2015085765	F	<0.500	ppm	07/20/15 23:26	Rugh
Well #RW2	2015085766	F	<0.500	ppm	07/20/15 23:02	Rugh

### Cond\_Dup

Well #44	2015085763	Cond_Dup RPD	96.5 0.3	umho/cm %	07/20/15 23:26	Rugh
Well #RW2	2015085766	Cond_Dup RPD	266.0 0.8	umho/cm %	07/20/15 23:28	Rugh

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Suzy Rugh

### Laboratory Approval

Horace Whitaker  
07/23/15 15:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
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*Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.*

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
<b>Ammonia-Nitrogen</b>						
Well #3A	2015085773	NH3-N	<1.00	ppm	07/19/15 05:28	Swafford
Well #14	2015085774	NH3-N	2.77	ppm	07/19/15 05:28	Swafford
Well #15	2015085775	NH3-N	12.6	ppm	07/19/15 05:28	Swafford
Well #16	2015085776	NH3-N	16.2	ppm	07/19/15 05:29	Swafford
Well #20	2015085777	NH3-N	<1.00	ppm	07/19/15 05:29	Swafford
Well #23	2015085778	NH3-N	<1.00	ppm	07/19/15 05:29	Swafford
Well #24	2015085779	NH3-N	<1.00	ppm	07/19/15 05:30	Swafford
Well #26	2015085780	NH3-N	<1.00	ppm	07/19/15 05:31	Swafford
Well #27	2015085781	NH3-N	7.88	ppm	07/19/15 05:32	Swafford
Well #33	2015085782	NH3-N	<1.00	ppm	07/19/15 05:32	Swafford
Well #39	2015085783	NH3-N	<1.00	ppm	07/19/15 05:32	Swafford
Well #41	2015085784	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford
Well #43	2015085785	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

## Regulatory Compliance Samples

Responsible Engineer <b>Cynthia Logsdon</b>	Phone <b>3171</b>	Location <b>EH&amp;S</b>	Lab Report No. <b>2015085773</b>
Sample Type <b>Well Samples</b>			Sample Date <b>07-16-2015</b>

Remarks

### Analysis Method

Sample ID.	LIMS No.	Parameters	Results	Units	Data Entry @	Analyst
Well #44	2015085786	NH3-N	<1.00	ppm	07/19/15 05:33	Swafford
Well #47	2015085787	NH3-N	18.9	ppm	07/19/15 05:34	Swafford
Well #48	2015085788	NH3-N	<1.00	ppm	07/19/15 05:34	Swafford
Well #RW2	2015085789	NH3-N	<1.00	ppm	07/19/15 05:34	Swafford
NH3-N Sample Preservative: H2SO4 FSC Lot#108088						

Methods used to perform these analyses are from Environmental Protection Agency and/or American Public Health Association publications. In some cases, slight modifications are made as warranted.

### Chain of Custody

Time Collected 08:30 - 14:45  
Sampler: R. Crews  
Released to: Matt Swafford

### Laboratory Approval

Horace Whitaker  
07/20/15 11:32

**Enclosure h)**

**Westinghouse Electric Company  
In-Field Elevation and Depth to Groundwater Forms**



# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Oct

Year: 2014

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	8.6	12.7				
WELL	7	2.0	12.3	16.1				
WELL	10	-.5	16.7	20.7				
WELL	13R	-.7	13.1	13.6				
WELL	14	1.4	17.8	18.3				
WELL	15	1.2	12.9	14.5				
WELL	16	-.7	4.1	11.1				
WELL	17	1.6	14.9	17.8				
WELL	18	-.4	12.4	21.4				
WELL	20	2.7	10.4	10.4				
WELL	22	-.6	11.8	13.4				
WELL	23R	3.0	19.7	21.6				
WELL	24	2.0	13.3	13.5				
WELL	26	1.5	26.2	*				
WELL	27	1.6	10.9	15.2				
WELL	28	1.8	12.6	13.6				
WELL	29	1.5	12.3	12.3				
WELL	30	1.8	12.7	12.9				
WELL	32	2.0	19.7	21.3				
WELL	33	1.1	16.1	17.1				
WELL	38	-.7	10.0	11.5				
WELL	39	2.7	16.6	16.8				
WELL	41R	2.6	15.9	*				
WELL	43	2.9	16.2	16.6				
WELL	44	3.0	19.2	19.7				

Technician: R. Crews

Date Sampled: 10/6,7&8/2014

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: OctYear: 2014[illegible]

Technician: **R. Crews**

Date Sampled: **10/6,7,&8/2014**

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Jan

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	6.7	11.3				
WELL	7	2.0	11.7	16.2				
WELL	10	-.5	16.6	20.5				
WELL	13R	-.7	12.7	13.3				
WELL	14	1.4	16.9	17.5				
WELL	15	1.2	12.4	14.4				
WELL	16	-.7	4.1	11.2				
WELL	17	1.6	14.6	17.5				
WELL	18	-.4	11.9	22.7				
WELL	20	2.7	7.6	7.6				
WELL	22	-.6	10.8	12.9				
WELL	23R	3.0	19.9	21.5				
WELL	24	2.0	13.3	13.5				
WELL	26	1.5	26.2	*				
WELL	27	1.6	10.2	15.0				
WELL	28	1.8	12.5	13.1				
WELL	29	1.5	12.1	12.3				
WELL	30	1.8	12.5	12.7				
WELL	32	2.0	19.2	19.7				
WELL	33	1.1	16.0	16.8				
WELL	38	-.7	9.8	11.4				
WELL	39	2.7	16.3	16.6				
WELL	41R	2.6	15.8	*				
WELL	43	2.9	14.6	15.0				
WELL	44	3.0	19.1	19.9				

Technician: R. Crews

Date Sampled: 1/12,19,20&21/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: Jan

Year: 2015[illegible]

Technician: **R. Crews**

Date Sampled: 1/12,19,20&21/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: April

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	5.9	10.0				
WELL	7	2.0	11.3	16.4				
WELL	10	-.5	15.7	20.6				
WELL	13R	-.7	11.6	12.2				
WELL	14	1.4	16.2	16.7				
WELL	15	1.2	11.9	14.1				
WELL	16	-.7	3.4	11.0				
WELL	17	1.6	14.2	17.3				
WELL	18	-.4	11.5	23.0				
WELL	20	2.7	7.2	7.5				
WELL	22	-.6	10.3	12.7				
WELL	23R	3.0	18.9	21.4				
WELL	24	2.0	9.1	9.3				
WELL	26	1.5	26.3	*				
WELL	27	1.6	10.0	14.8				
WELL	28	1.8	11.8	12.3				
WELL	29	1.5	11.4	11.5				
WELL	30	1.8	11.8	12.0				
WELL	32	2.0	18.7	21.3				
WELL	33	1.1	15.5	16.5				
WELL	38	-.7	9.1	10.7				
WELL	39	2.7	15.7	16.0				
WELL	41R	2.6	15.6	*				
WELL	43	2.9	14.3	14.8				
WELL	44	3.0	18.7	19.4				

Technician: R. Crews

Date Sampled: 4/9,13,14&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

FORM NO.:	ROF-06-007-2
REVISION:	5
PAGE:	1 OF 1
EFFECTIVE DATE:	06/05/07

Month: April Year: 2015

[illegible]Date Sampled: 4/9,13,14&16/2015

\* Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

# TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
 REVISION: 5  
 PAGE: 1 OF 1  
 EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: July

Year: 2015

SAMPLE	NO.	Pipe to ground	Before bailing	After bailing				
WELL	3A	2.0	7.9	11.1				
WELL	7	2.0	11.7	17.4				
WELL	10	-.5	16.2	20.7				
WELL	13R	-.7	12.1	12.7				
WELL	14	1.4	17.0	17.5				
WELL	15	1.2	12.6	14.5				
WELL	16	-.7	3.9	11.0				
WELL	17	1.6	14.4	17.1				
WELL	18	-.4	11.7	23.0				
WELL	20	2.7	9.9	10.0				
WELL	22	-.6	10.7	12.6				
WELL	23R	3.0	19.1	20.8				
WELL	24	2.0	11.4	11.6				
WELL	26	1.5	25.7	*				
WELL	27	1.6	11.0	14.9				
WELL	28	1.8	11.8	12.3				
WELL	29	1.5	11.5	11.5				
WELL	30	1.8	11.8	11.9				
WELL	32	2.0	19.1	20.8				
WELL	33	1.1	15.7	16.5				
WELL	38	-.7	9.3	9.3				
WELL	39	2.7	16.1	16.2				
WELL	41R	2.6	15.5	*				
WELL	43	2.9	15.4	15.8				
WELL	44	3.0	18.9	19.6				

Technician: R. Crews

Date Sampled: 7/10,13,15&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor

## TWO INCH WELL LEVELS

FORM NO.: ROF-06-007-2  
REVISION: 5  
PAGE: 1 OF 1  
EFFECTIVE DATE: 06/05/07

VENDOR: N/A

Month: July

Year: 2015[illegible]

Technician: **R. Crews**

Date Sampled: 7/10,13,15&16/2015

\*Level not checked after bailing/pumping due to well being pumped/bailed dry by vendor



**Enclosure i)**

**Isoconcentration Maps for Parameters Monitored for  
Groundwater MCL Exceedences**

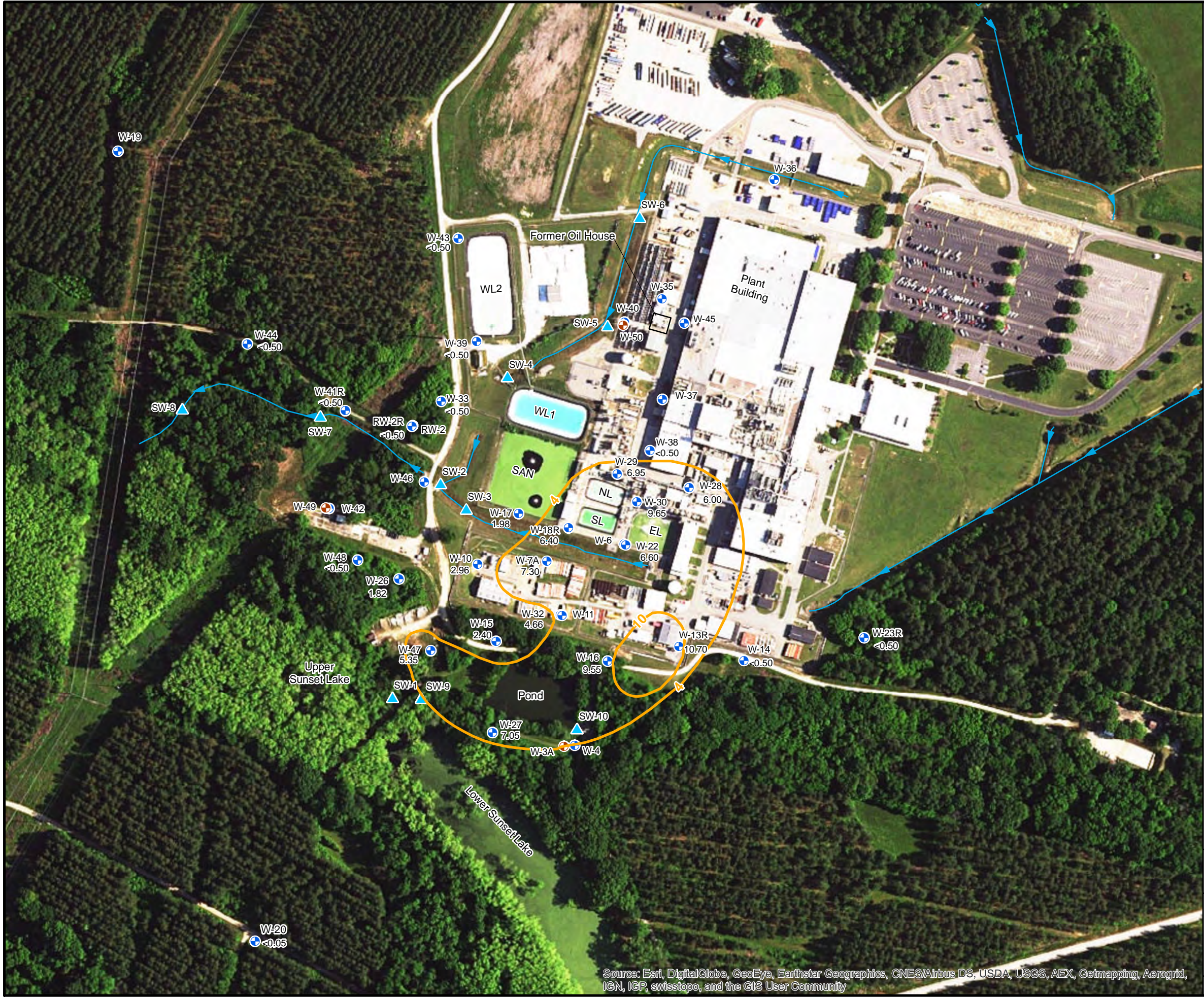
**Fluoride**

**Nitrate**

**Gross Alpha**

**Gross Beta**





### Legend

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- 6.95 Fluoride Concentration (mg/L)
- Fluoride Isoconcentration Contour (mg/L)
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2

300 150 0 300 Feet  
1:3,600

Map Projection: NAD 1983, South Carolina State Plane, FIPS 3900, Feet  
Datum: North American 1983



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### FLUORIDE IN GROUNDWATER JULY 2015

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411 PREPARED BY: KPM DATE: December 2015

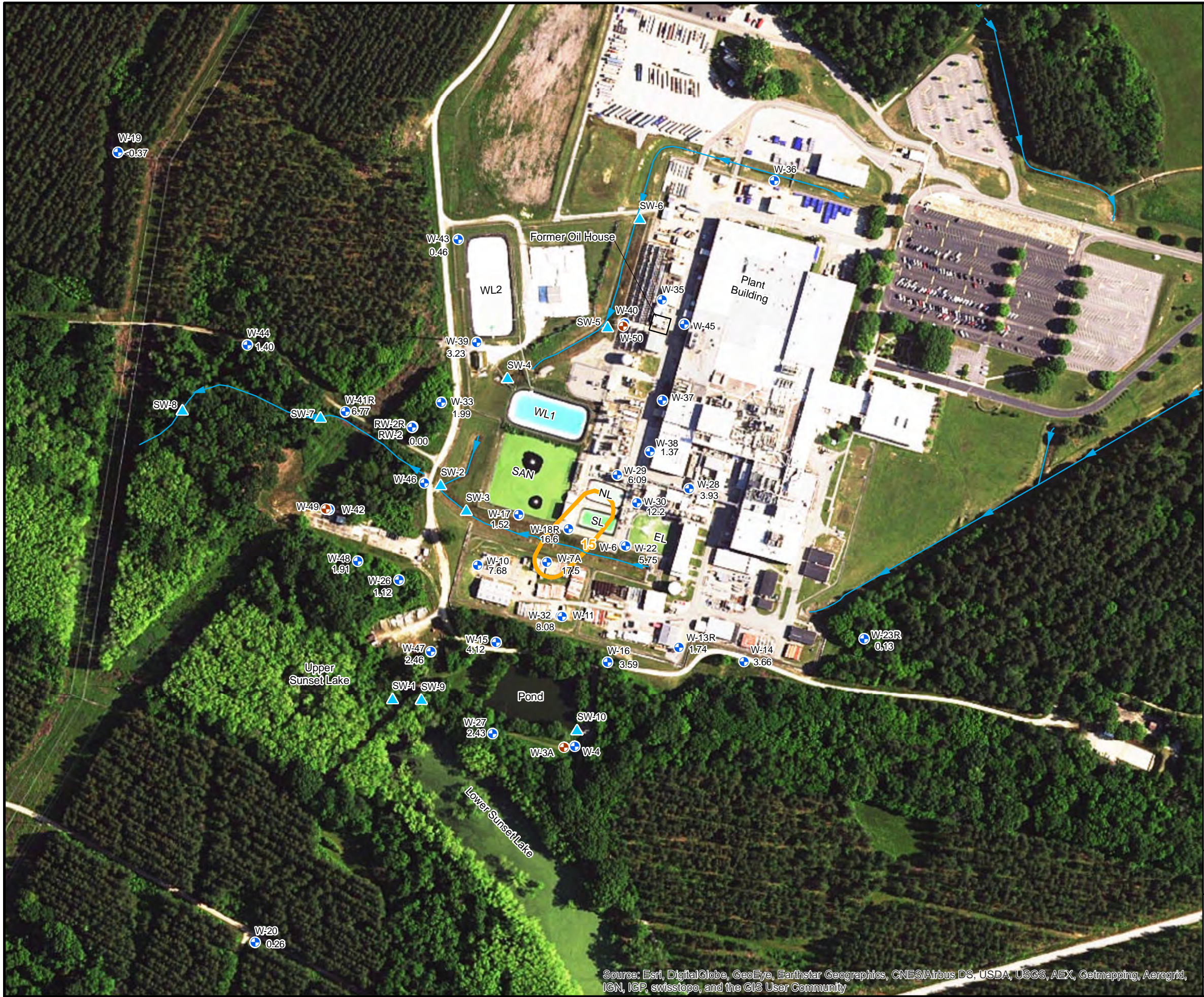
FIGURE I1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community









### Legend

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- 6.09 Gross Alpha Concentration (pCi/L)
- Gross Alpha Isoconcentration (pCi/L)
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2

300 150 0 300 Feet  
1:3,600

Map Projection: NAD 1983, South Carolina State Plane, FIPS 3900, Feet  
Datum: North American 1983



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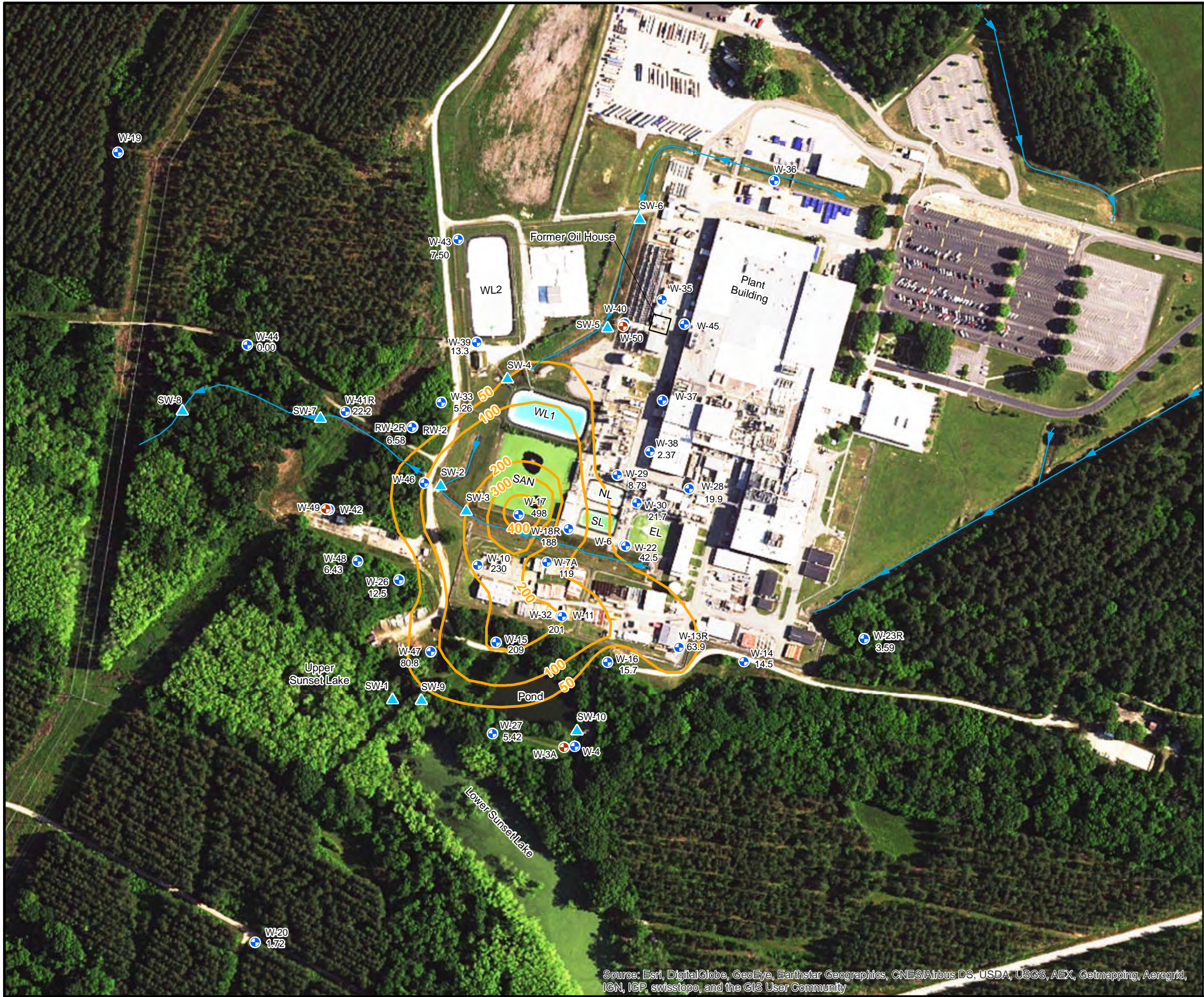
### GROSS ALPHA IN GROUNDWATER JULY 2015

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411	PREPARED BY: KPM	DATE: December 2015	<b>FIGURE I3</b>
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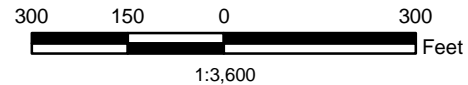
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community





### Legend

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- 8.79 Gross Beta Concentration (pCi/L)
- Gross Beta Isoconcentration Contour (pCi/L)
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2



Map Projection: NAD 1983, South Carolina State Plane, FIPS 3900, Feet  
Datum: North American 1983

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### GROSS BETA IN GROUNDWATER JULY 2015

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411	PREPARED BY: KPM	DATE: December 2015	<b>FIGURE I4</b>
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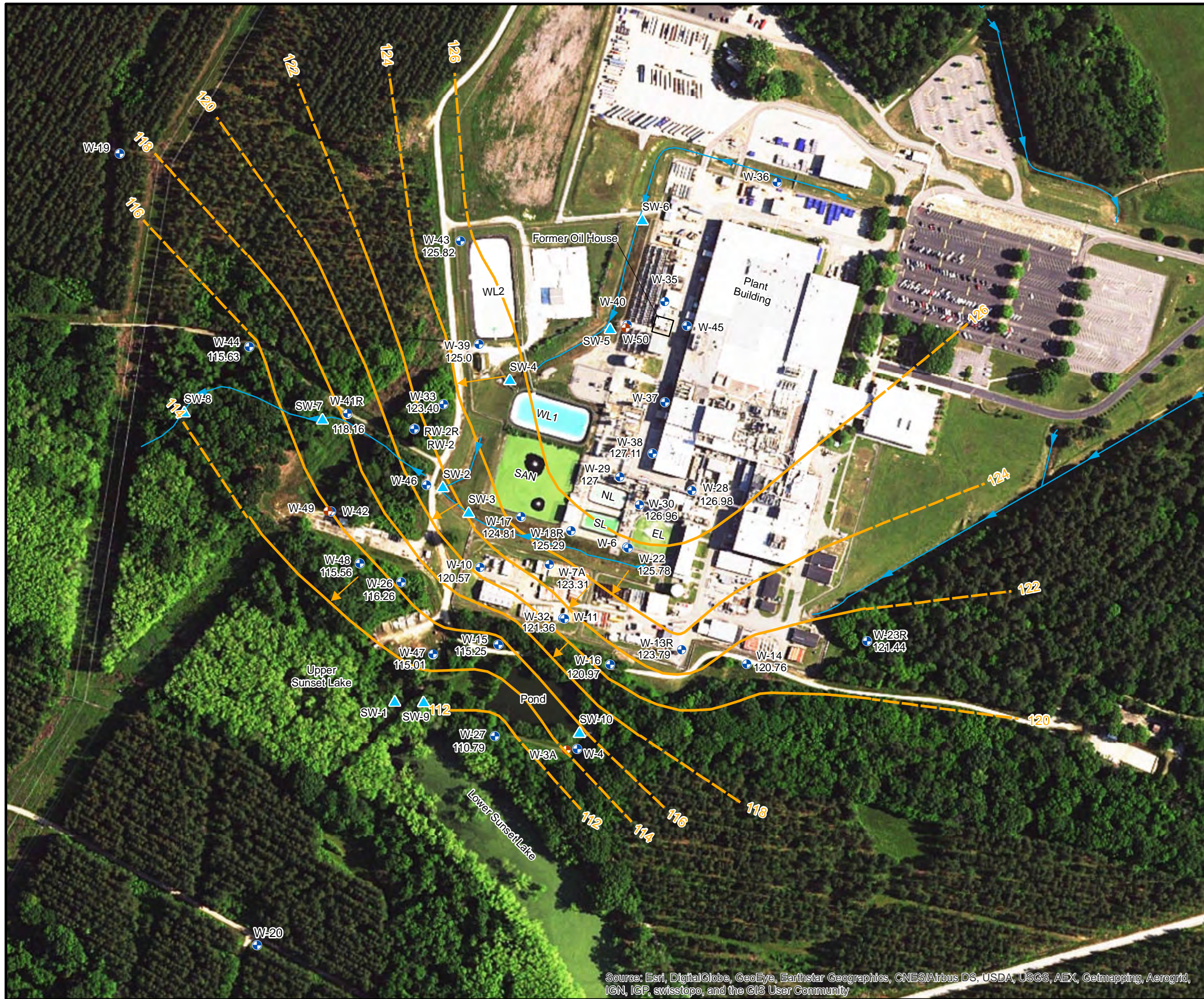
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Enclosure j)**

**Water Table Surface Map Using Shallow Aquifer Water Level  
Elevations, AECOM**





#### Legend

- Shallow Aquifer Monitoring Well Location
- Black Mingo Aquifer Monitoring Well Location
- Surface Water/Sediment Sampling Locations
- Ditch
- Water Table Surface Contours
- 120.79 Water Level Elevation (Ft msl) on June 6, 2013
- Inferred Groundwater Flow Direction
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon 1
- WL2 West Lagoon 2

300 150 0 300  
Feet  
1:3,600

Map Projection: NAD 1983, South Carolina State Plane,  
FIPS 3900, Feet

Datum: North American 1983

**AECOM**

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#### WATER TABLE SURFACE MAP July, 2015

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY  
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60476411 PREPARED BY: KPM DATE: December 2015

**FIGURE J1**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Enclosure k)**

**Contaminant Trend Graphs, AECOM**



Figure K1 - Fluoride Concentration Trends

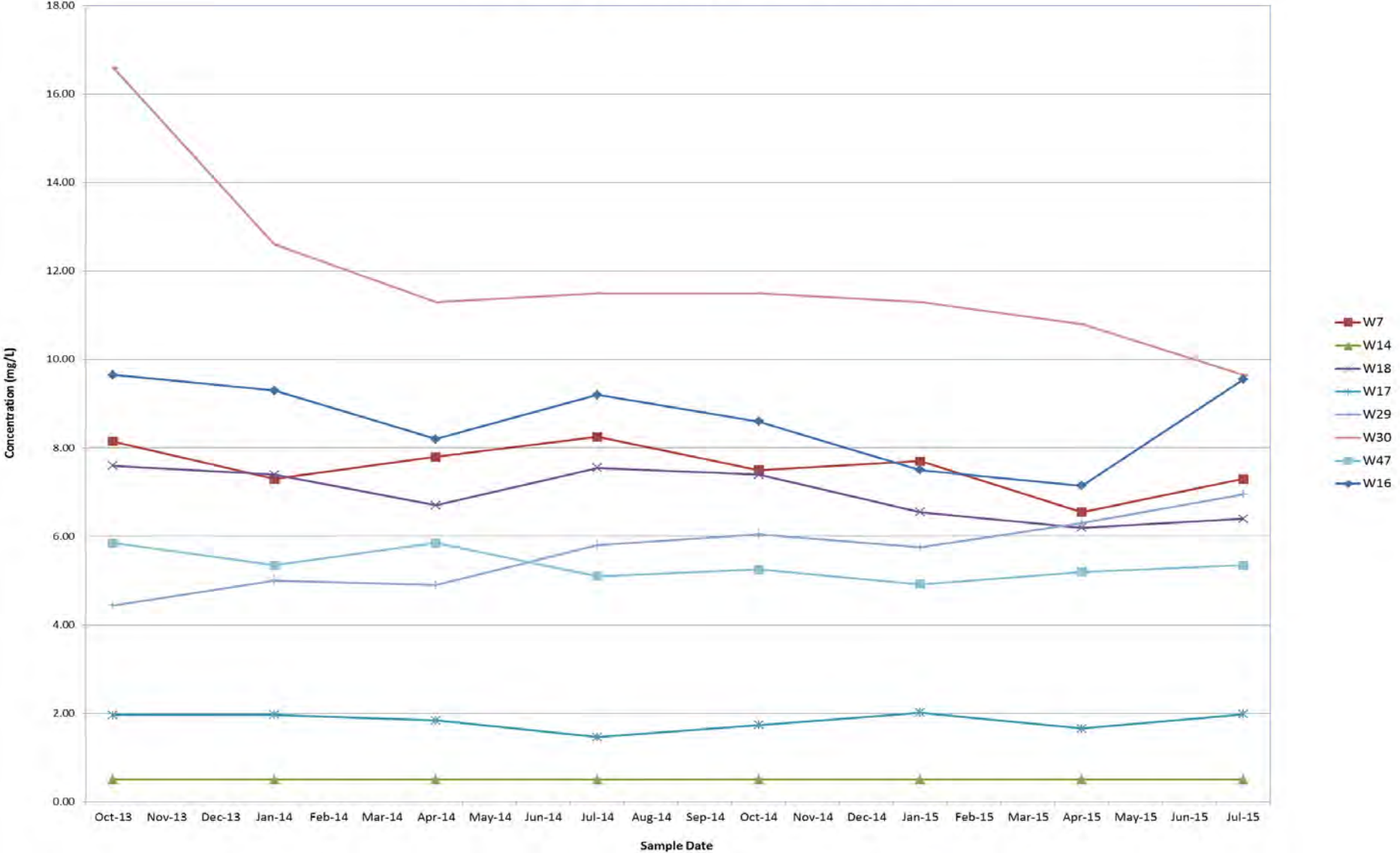


Figure K2- Nitrate Concentration Trends

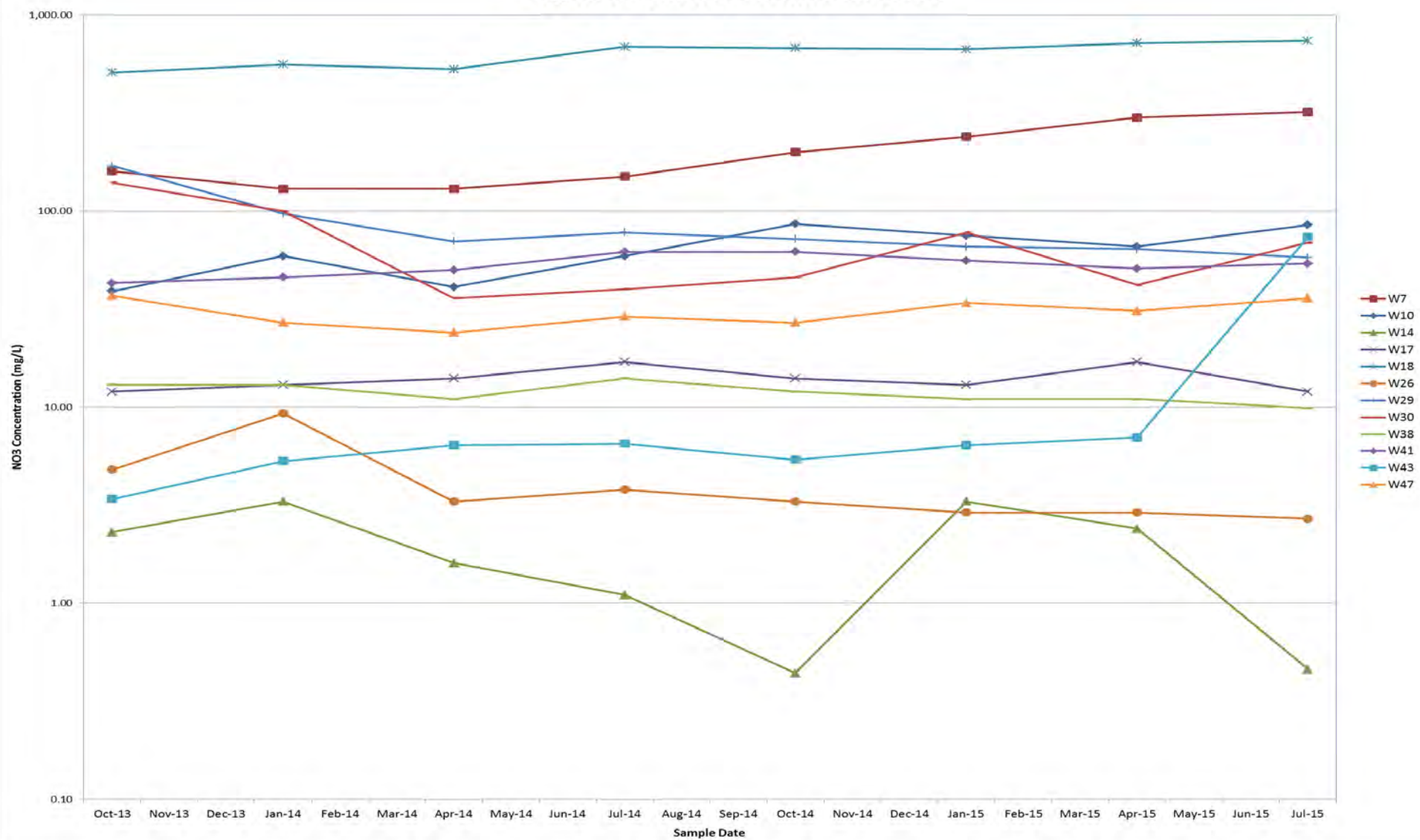


Figure K3 - Gross Alpha Concentration Trends

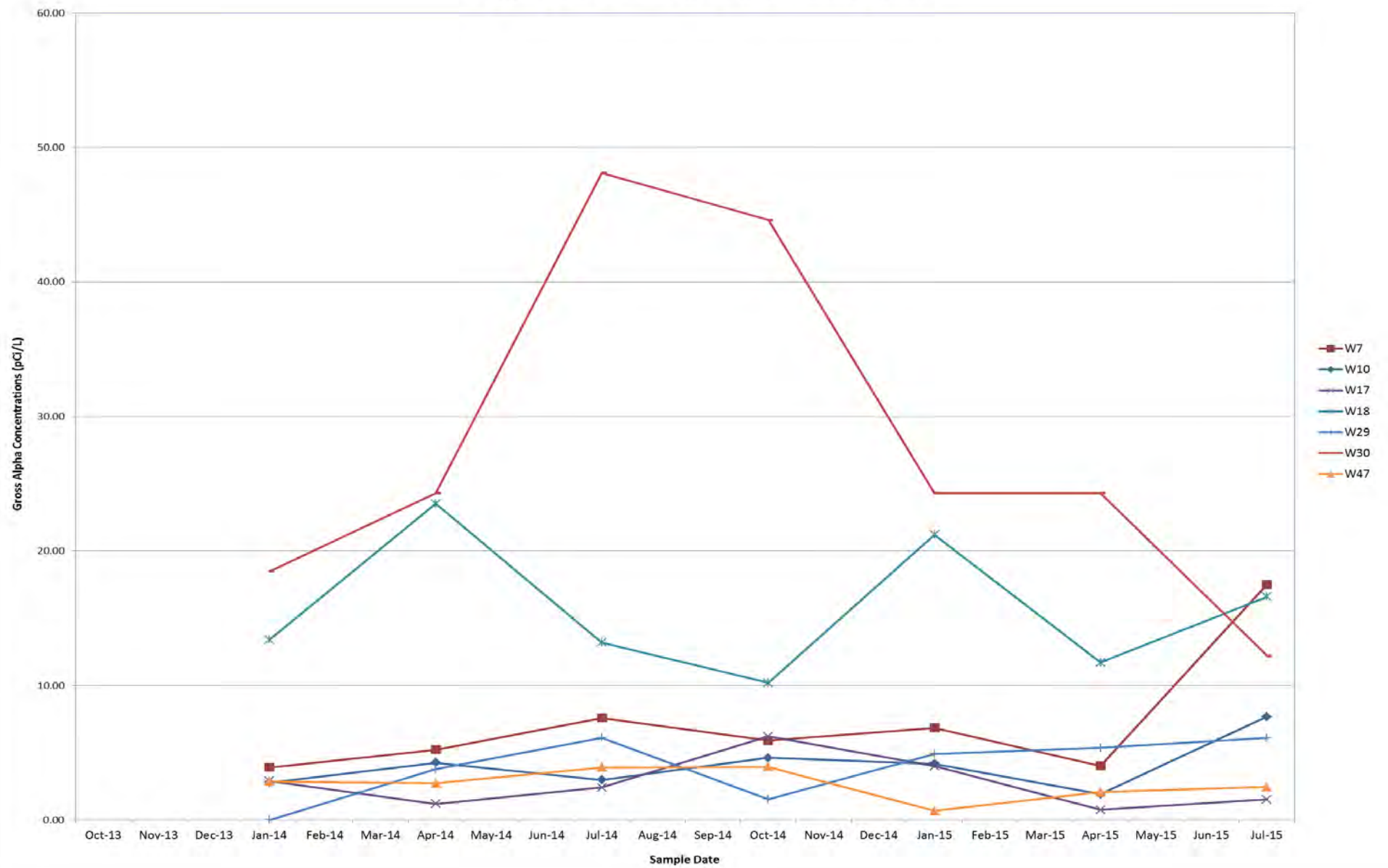
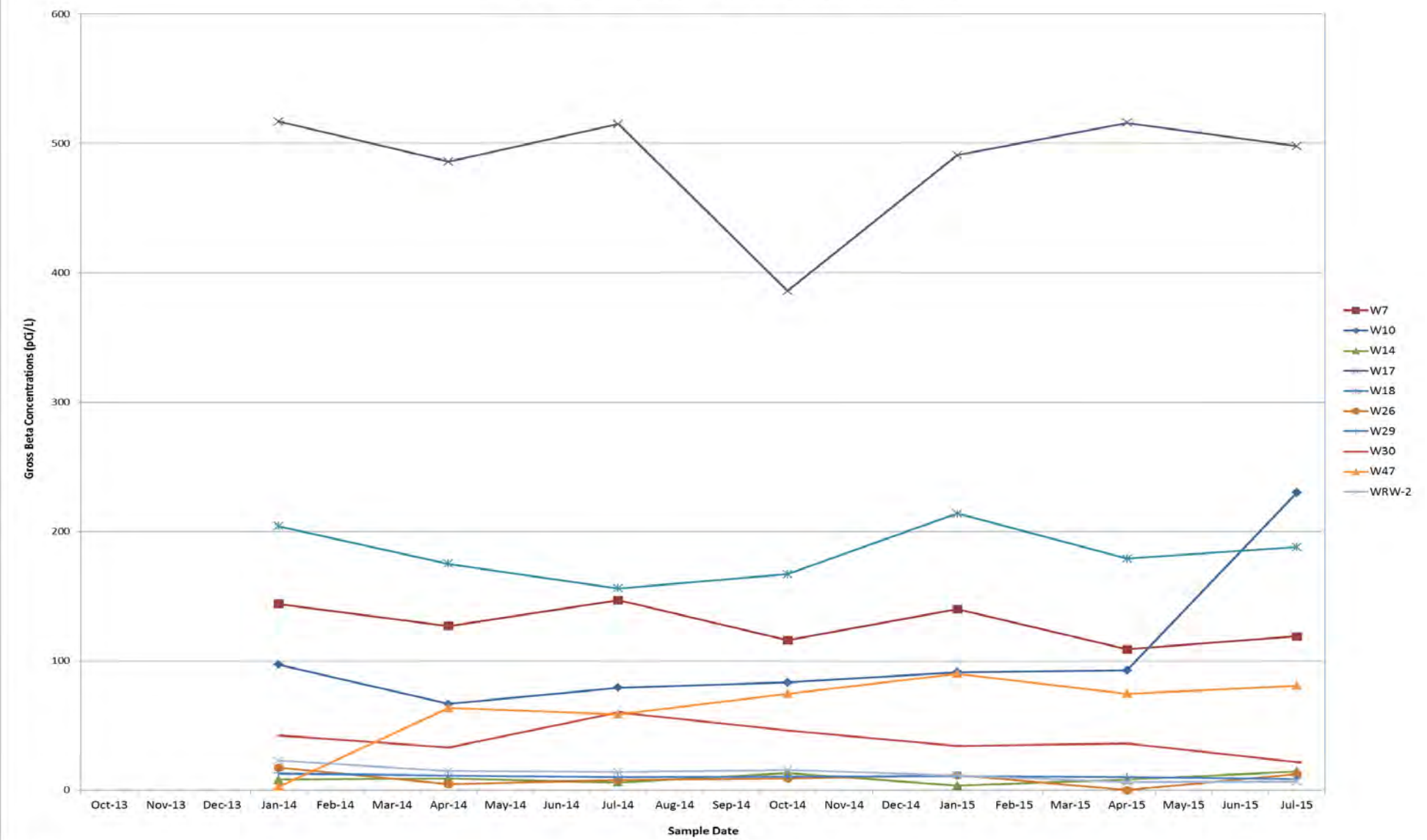


Figure K4 - Gross Beta Concentration Trends



**Enclosure I)**

**Discussion of the Water Quality Trends Over the Last Two  
Years, AECOM**

## **Groundwater Trend Discussion**

Groundwater quality data for the last two years was used to create time-series trend plots for select monitoring wells for fluoride, nitrate, gross alpha, and gross beta (Figures K1 through K4). For each compound, monitoring wells were selected for analysis by including wells that are within the plume and along the edges of the plume. A discussion of the trend plots is included below.

Figure K1 illustrates fluoride concentration trends for eight wells. Fluoride concentrations in well W30 decreased over the last two years. Fluoride concentrations in the remaining wells remained stable and within historic ranges.

Figure K2 illustrates nitrate concentration trends for 12 wells. Nitrate concentrations increased and remained near historic highs in wells W7, W10, W18, and W43. Nitrate decreased or remained stable in the remaining wells and remained within historic ranges.

Figure K3 illustrates gross alpha concentration trends for seven wells. Gross alpha concentrations were generally elevated in samples from wells W18 and W30. Gross alpha increased in well W30 in July 2014, remained elevated in October 2014, and then decreased in between January 2015 and July 2015. Gross alpha remained slightly elevated in well W18. Gross alpha increased in well W7 in July 2015. Gross alpha remained relatively low in wells W10, W17, W29, and W47. Gross alpha remained within historic ranges in all monitoring wells.

Figure K4 illustrates gross beta concentration trends for 10 wells. Gross beta remained elevated and at the highest historical concentrations in well W17. Gross beta concentrations remained elevated but within historical ranges in samples from wells W7, W10, W18, and W47. Gross beta remained low and within historic ranges in wells W14, W26, W29, W30, and WRW2.

**Enclosure m)**

**PG Signature, AECOM**

## Professional Geologist Certification

"I certify that I am a qualified groundwater scientist who has received a baccalaureate degree in geology and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by South Carolina registration and completion of accredited university courses that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that I have technically reviewed this report."

By: Charles K. Suddeth  
Charles K. Suddeth, P.G.  
Registered Professional Geologist  
South Carolina P.G. No.: 969

Date: December 29, 2015



Enclosure 3